

THE TEXTILE MUSEUM  
JOURNAL

1995-1996





# THE TEXTILE MUSEUM JOURNAL

1995-1996

VOLUMES 34 AND 35

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2320 S Street NW Washington DC 20008-4088



Cover : Inca woman's shawl, detail. Weft-faced plain weave and complementary-weft weave stripes. Cotton warp, camelid fiber weft. The Textile Museum 91.366. See Ann Pollard Rowe, *Inca Weaving and Costume*, pp. 5-53, fig. 27.

ISSN: 0083-7407

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## CONTRIBUTORS

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This publication was made possible through the generosity of the following contributors:

Michael and Georgia de Havenon

Joan Jacobson

Perry Lewis

The Ronald and Maxine Linde Foundation

Marion Stirling Pugh

Estate of Thomas D. Rimpler

John and Donna Sommer

Bentley Terrace and Roy Dillard

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# Inca Weaving and Costume

Ann Pollard Rowe

The Inca empire originated in Cuzco in what is now south highland Peru, beginning its expansion in 1438. At the time of the Spanish invasion in 1532, the Incas ruled the Andean area from what is now northern Ecuador through Peru and Bolivia to parts of Chile and Argentina. Such a vast empire naturally included a great diversity of peoples with widely varying textile and costume traditions. The intent here, however, is not to describe the costumes of the entire empire, but as closely as possible to illuminate what type of costume was worn by people of the Cuzco area, and secondarily to look at the contexts in which this costume tradition has been found in the rest of the empire.<sup>1</sup>

Previous modern reconstructions of Inca costume have mainly been based on historical accounts written under Spanish rule. The most detailed colonial description of Inca costume and weaving, and thus the one most often used in modern scholarship, is by Bernabé Cobo, a Jesuit priest and scholar.<sup>2</sup> Since he was writing more than a century after the conquest (finished 1653), one must beware of a few anachronistic details. Other earlier authors provide lesser amounts of information, which can be used to help check Cobo. The best pictorial source is the drawings in the manuscript (finished 1615) of Felipe Guaman Poma de Ayala, an indigenous nobleman writing to the king of Spain to complain about the Spanish administration (fig. 1). Guaman Poma wrote both about Inca customs before the arrival of the Spanish and about customs of his own time. In his drawings he was careful to differentiate the costumes characteristic of these two eras. He also distinguished among the slightly varying costumes of three different highland provinces. His representations of highland costume have proved accurate in most, though not quite all, of the particulars that can be checked.

While these sources provide general information about Inca costume, we cannot define what is Inca in any detail without reviewing the surviving textiles themselves. Although textile

223.



Fig. 1. Inca woman spinning (Guaman Poma, p. 223 [225]).

preservation is uncommon in the Cuzco area (apart from the occasional dry cave), Inca textiles have in fact been preserved on the dry desert coast of Peru and Chile and on snow-capped mountain peaks in the south Andes where the Incas made religious offerings that were preserved by freezing temperatures. The contexts of the coastal finds are varied and will be discussed below. The mountaintop offerings include human sacrifices that may wear, or have buried with them, a set of clothes as well as figurines of gold, silver, or spondylus shell, wearing miniature textile garments. While clothes associated with the human sacrifices may or may not be Inca in style, the style both of the figurines themselves and of their clothes is highly consistent, and can readily be identified as Inca. The clothes of these figurines can thus be used to help identify larger garments. Both male and female figurines occur, but for some reason female figurines are more commonly found. The present article focuses on these surviving textiles in order to flesh out what the historical sources tell us. The historical sources can in turn help interpret the special contexts of these finds.



## General Features of Inca Weaving

Before describing the evidence for particular garments, it is necessary to examine some general characteristics of Inca weaving. The following remarks are based upon detailed examination of many of the archaeological textiles described below.

Virtually all Inca textiles are woven with yarns Z-spun and S-plied, either two or three ply. The spinning is even and often very fine. As a south highland people, the Incas favored camelid fiber, and used that of all four of the Andean camelids, the domesticated alpaca and llama, and the wild vicuña and guanaco. However, Inca style cotton textiles woven with yarns of the same structure also exist from the period of the empire.

Guaman Poma illustrates Inca women spinning with a drop spindle (called *puchka* in Classic Inca, the verb for this method being *puchkay*), and supporting the unspun fiber on a small Y-shaped distaff (called *qalla*) held in the left hand (fig. 1).<sup>3</sup> The lower fingers are curled around the stem of the distaff, while the thumb and first finger are extended to help draft the fiber. Garcilaso de la Vega, the son of a Spaniard and an Inca princess, who grew up in Cuzco in the 1540s and 1550s, describes the same spinning method in detail, and also mentions the use of a loop around the spindle to secure the yarn in preparation for dropping the spindle.<sup>4</sup>

Garcilaso says the spindles were of cane, with a whorl (called *phiruru*). Spindle whorls

were made of wood, bone, or clay.<sup>5</sup> The distaffs illustrated by Guaman Poma are similar to wooden ones still used in the Huancayo and Huancavelica areas of Peru,<sup>6</sup> but they are no longer used around Cuzco. Cobo describes the same distaff but says it was often dispensed with and the fiber merely wrapped around the wrist,<sup>7</sup> which is the usual technique around Cuzco today. Cobo also says that when spinning seated, women supported the spindle on a small clay dish.

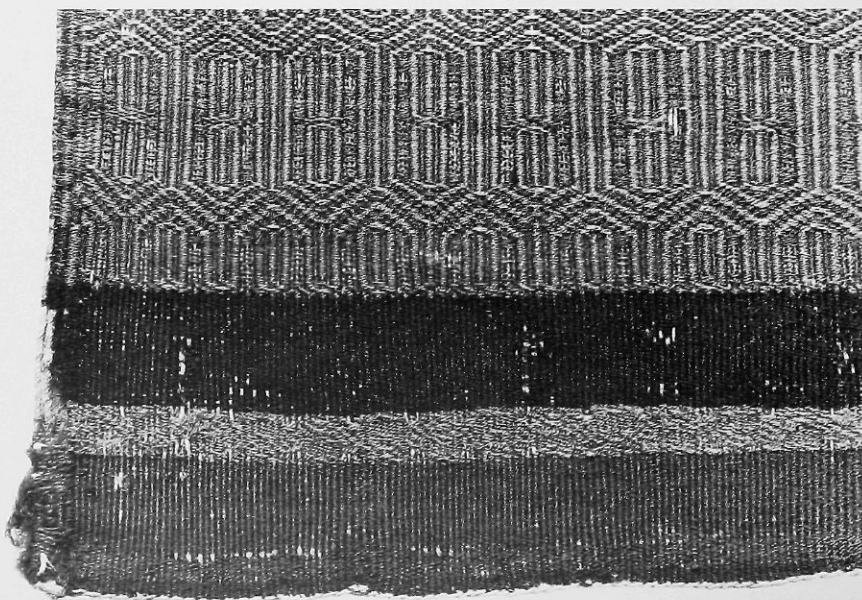
Garcilaso says that spinning and weaving for the household were women's tasks, and that women spun while visiting each other so as not to waste time. Ordinary women plied yarn as they walked, which was also done by dropping the spindle (verb *k'antiy*). Cobo says that men sometimes helped with plying, especially old men. One of Guaman Poma's illustrations shows a woman spinning and a man plying (p. 57).

According to Garcilaso, it was men's work to make footwear and slings. The men's technique of producing coarser yarn for sandal fastenings and rope (*milluy*) was completely distinct from women's spinning.<sup>8</sup> The men's technique is also still used in the Cuzco area.<sup>9</sup> The spindle is a stick with a notch near one end but no whorl. The fibers are first drawn into a long length, then wrapped onto the notch of the spindle. The spindle is held in the right hand and the right wrist is rotated, while also allowing the stick to rotate loosely in the hand. The left hand regulates the passage of the fiber and the degree of twist.

Unlike coastal textiles, virtually all Inca cloth is either warp-faced or weft-faced. As it turns out, it is not easy to distinguish warp from weft in many Inca textiles, especially since some common kinds of patterning can be woven in either the warp or the weft direction, and the edges are usually tightly covered with embroidered bindings.

The embroidered edge bindings are distinctive. A combination of cross-knit loop stitch, with a single loop along the edge of the textile and extensions 6–8 mm long, and plain close overcasting with the same length of stitch, is used. In large textiles, the overcasting is found on the long edges while the cross-knit loop stitch occurs on corners. The arrangement of the two stitches and their colors is consistent within each different garment type. The edge bindings may be either striped (usually on finer textiles) or solid color (usually on plainer textiles), and if solid color, may or may not match the fabric. Seams are most often sewn with closely worked figure-

Fig. 2. Detail of a fragmentary Inca bag in weft-faced plain weave and complementary-weft weave, showing selvages like those of most Inca tapestry-woven textiles. Cotton warp (3-ply) and camelid fiber weft. Weft yarns are red, two shades of yellow, and dark blue. Shown with warp vertical, perpendicular to use. The Textile Museum 91.201.





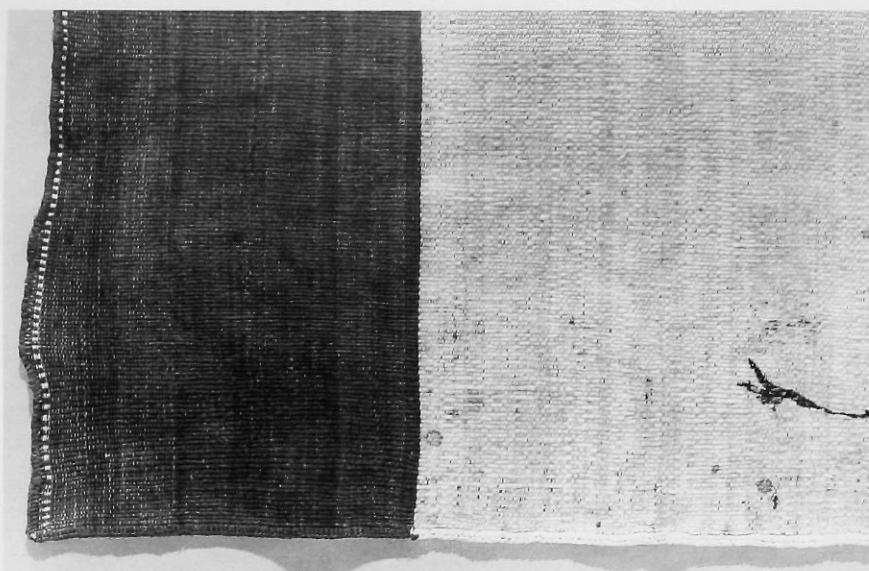
eight stitching in a color that matches the weaving, though finer tunics have striped seams.

The warp and weft directions are at least obvious in tapestry-woven textiles, which are normally very finely woven with single interlocked joins, and these provide information about the characteristics of selvages on Inca weft-faced cloth. The majority of the tapestry-woven tunics have several heavier warp yarns on the side selvages (at the bottom of the tunics), while on the ends (side edges of the tunics) they have short projecting warp loops chained through each other (similar to the textile in figure 2).<sup>10</sup> It appears that the warp loops are the result of a single heavy heading cord that was withdrawn after the weaving was complete. Occasionally, the heading cord is left in place and there are no projecting loops. The heading cord contrasts with the rest of the weft yarns in both size and color. In a few cases, however, the end selvages have neither of these characteristics but rather have the regular weft yarns woven right up to the ends of the warp loops.<sup>11</sup>

The heavier warp yarns on the side edges of Inca tapestry textiles (again, similar to those in figure 2) closely resemble the thicker weft yarns on the ends of many warp-faced textiles, both Inca examples and those woven in highland Peru today, as well as the heavier weft yarns common on the end selvages of most coastal Peruvian textiles. Therefore, the existence of such heavier yarns on the edge of an Inca textile cannot be used to determine the warp or weft direction. It is necessary instead to examine the remaining edges. Chained warp loops (or slightly projecting loops) or a single heading cord indicate that the textile is weft-faced, as in the example in figure 2. Absence of any distinctive selvedge suggests that the textile may be warp-faced, although it is not as definitive as chained loops.

To verify the weave direction of a textile with simple edges, or if the edges are completely covered up or missing, other kinds of clues must be used. These clues are based on the fact that the warp is held under tension, while the weft is added during the weaving process.

For example, a weft yarn may turn back somewhere other than the selvedge for no reason other than to even out the weaving. In a warp-faced fabric, such weft turns are clearly visible and would logically indicate warp-faced weaving (figs. 3, 4).<sup>12</sup> Some Inca bags have a dovetailed join of discontinuous elements along the bottom, in order to create different designs or colors on the two sides. These joins often



meander over more than one hidden element, suggesting that the fabric is weft-faced (fig. 5).<sup>13</sup> Use of discontinuous warp yarns is much more difficult, and though practiced in ancient Peru, it is not usual in Inca weaving (except in breechcloths, see below). An occasional loose loop or end of a surface element would also suggest that the fabric is weft-faced.

Moreover, warp yarns are usually (though not invariably) more tightly twisted than weft yarns. Thus, a tightly twisted three-ply yarn in the hidden set of elements would be warp (as is often the case in Inca tapestry), especially if it is cotton with camelid fiber surface elements.

Fig. 3. Detail of an Inca woman's shawl in warp-faced plain weave cotton (brown and white). The bulge on the side edge indicates the area of terminal weaving. There is a discontinuous weft in the middle near the lower edge. Shown with warp vertical, perpendicular to use. The Textile Museum 1990.2.2, gift of Victor R. Garatea.



Fig. 4. Inca bag in warp-faced plain weave and complementary-warp weave with embroidered zigzags, camelid fiber warp and weft. Despite the crooked warp yarns, there are some discontinuous weft yarns and the weft is loosely twisted. The surface yarns are cream, black, and two shades of brown. 20 x 23 cm (excluding cord). The Textile Museum 91.326.



Fig. 5. Inca bag said to have been found in the Chancay Valley. Weft-faced plain weave and complementary-weft weave, with discontinuous-weft dovetailed join at the lower edge, camelid fiber warp (3-ply) and weft. The surface yarns are white, gray, and three shades of brown. The other side of the bag is plain stripes. Strap in double-woven complementary-warp weave. 19.5 x 19.5 cm (excluding strap). The Textile Museum 1975.1.6, gift of Dr. and Mrs. Sanford M. Rosenthal.



Cotton is stronger than animal hair and so is particularly suitable for warp in a weft-faced textile, which requires tighter and less variable tension than warp-faced weaving.

Since they are not under tension, weft yarns are more likely not to lie perfectly straight than warp yarns and are more likely to be unevenly compacted. If the sizes of stripes that are symmetrically colored are noticeably different, or the count of the surface elements varies from one part of the textile to another, the fabric is probably weft-faced. Variable counts of hidden elements are more likely to indicate a warp-faced fabric. Although it was general Inca practice to

insert the last weft yarns with sufficient care so that no difference in texture is discernible in these areas, occasionally in the most coarsely woven textiles an area of looser terminal weaving can be identified, providing a further clue that these fabrics are warp-faced (fig. 3). The area of terminal weave in the textile in figure 3 is also characterized by a bulge in the weft selvedge. Other types of uneven selvages can be found in both the warp and the weft direction.

The conclusion about whether a textile is warp-faced or weft-faced can sometimes only be reached after careful and detailed examination and consideration of a combination of the above factors.<sup>14</sup> The bag in figure 6 can be taken as an example of the difficulties involved. The not quite symmetrical way in which some of the designs are woven suggests weft-faced weaving, as does the cotton fiber of the hidden elements. However, there are three discontinuous hidden elements, which should indicate warp-faced weaving. On one side edge of the bag, the edge binding is broken in two places, revealing an edge finish in which the hidden elements are cut and interlaced back diagonally to secure them. This is not a usual Inca selvedge, but it cannot be anything other than a warp edge, confirming that the piece is weft-faced. What then to make of the discontinuous warp turns? Do we perhaps have a non-Inca weaver attempting to make a beautiful Inca style bag, incorporating in the visible parts of the bag features he or she has seen on Inca warp-faced bags, no matter how difficult to do in weft-faced weaving?

The similarity in appearance between warp-faced and weft-faced textiles is surely intentional. The relative thread counts, the selvedge treatments, and the edge bindings all contribute to the effect of uniformity. While it is difficult to speculate on the reasons, the obvious result is that it does enable the stripe orientation of a given type of garment to be the same, no matter which way it was woven. Indeed, all Inca bags have vertical stripes and all evidence points to women's garments being worn with the stripes horizontal.

Inca textiles (apart from narrow bands) that are not tapestry woven are usually either decorated with stripes alone or with stripes that include some patterning in complementary sets of elements (figs. 2, 4, 5, etc.). In this structure, which can be woven in either the warp or the weft direction, there are two sets of elements of contrasting color. In Inca examples, the yarns of each color alternate in *a-b-a-b* order. The yarns of



one color interlace over-three under-one, creating a pattern zone in that color on the front, while the other color interlaces under-three over-one, creating a pattern zone of the opposite color on the back. The three-span floats are in alternating alignment.<sup>15</sup> The two colors exchange faces at intervals to create patterns. The most common color combination in Inca examples is red and yellow, sometimes varied by an intervening stripe in red and purple.

Inca examples all have variations on the same basic design, a zigzag and dot pattern that appears to be related to the tapestry tunic design that John Rowe calls the "Inca key," by analogy with "Greek key."<sup>16</sup> We have no historical record of what its significance was to the Incas. This design is natural to weave with complementary sets of elements, and less natural in tapestry. Because bags are relatively common, the comparison between the warp-faced and weft-faced versions can be most easily seen among them. The designs used are practically identical (figs. 2, 4, and 5). This design and the consistency of stripe orientation already mentioned are clearly more important cultural markers than status differences denoted by varying fineness in the weaving.

Although occasional exceptions can be found, Inca textiles with the highest thread counts are usually weft-faced. A clear example is the fragmentary bag in figure 2, which lacks its original edge bindings and has 13 warp and 90 weft yarns per cm in the plain stripes. These fine fabrics also usually have the camelid fiber weft yarns dyed in various colors, of which red and yellow are the most prominent. The more coarsely woven fabrics, on the other hand, often woven of undyed yarns, are usually warp-faced. The shawl in figure 3 has 18–23 warp yarns and 4 weft shots per cm. Another shawl found with the one in figure 3 has the same design but is slightly finer, at 25–29 warp and 5–6 weft yarns per cm.<sup>17</sup> The bag in figure 4 has 31 warp and 6–8 weft yarns per cm.

There is a technical basis for this dichotomy. When weaving weft-faced it is possible to compact the yarns more tightly than when weaving warp-faced because of the action of beating down each weft yarn after it is inserted. The use of dyed versus undyed yarns is a cultural matter, although it is easy to understand how dyed yarns would have higher status.

Fine weft-faced and dyed textiles as well as the coarse warp-faced and undyed textiles exist among large textiles such as women's shawls and

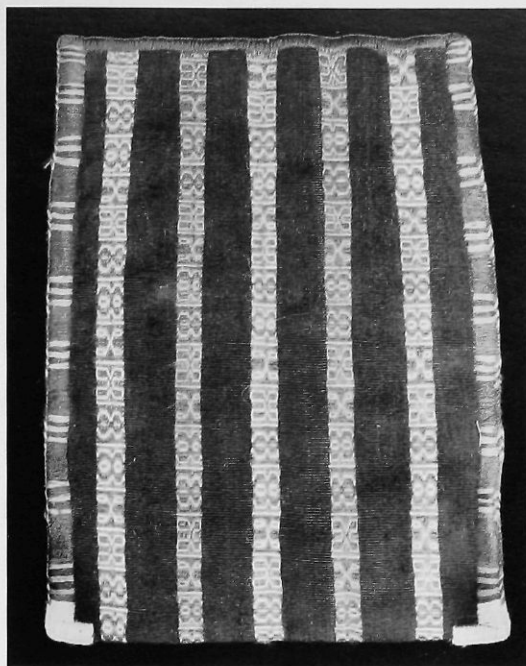


Fig. 6. Inca style bag in weft-faced plain weave and 3-color complementary-weft weave stripes. The plain stripes are maroon, and the patterned stripes are white or yellow with red and olive green. Cotton warp, camelid fiber weft. 21 x 16 cm. The Textile Museum 1996.34.1, anonymous donor.

wrapped dresses as well as among small items such as bags, and among plain-weave garments decorated only with stripes as well as those with patterning in complementary sets of elements.

Female figurines with a wardrobe of undyed (presumably warp-faced) textiles, and others with dyed (presumably weft-faced) textiles both exist.<sup>18</sup> The figurines with undyed clothes usually have a headdress of white feathers, while those with dyed clothes most often have a headdress of red feathers. These headdresses are clearly not everyday wear. A few full-sized feather headdresses of this kind have been found on some mountaintop female human sacrifices.<sup>19</sup> Interestingly, the status differences evident in the clothes do not always correlate with the materials of which the figurines themselves are made.

The Spanish sources also distinguish between two qualities of fabric. Cobo notes that "very fine and precious" cloth, called *qompi* (which the Spanish usually wrote as *cumbi*), was restricted to the nobility. "Coarse and thick" cloth, called *'awasqa* (which the Spanish usually wrote as *abasca* or *avasca*), meaning simply "woven cloth" in the Inca language, was worn by the common people. He specifies that *'awasqa* "is woven from coarser wool of llamas or alpacas.... They make it almost entirely of the natural color of the wool, and some of cotton."<sup>20</sup>

*Qompi*, on the other hand, is "made of the finest and most select wool of young animals," according to Cobo. Another account



suggests that *qompi* could be woven of cotton on the coast.<sup>21</sup> Cobo further describes *qompi* as having patterns in many threads, a description that fits tapestry weaving. Another author also specifies that *qompi* was made of the finest wool, dyed in many colors, and "woven like the tapestry of

Flanders" with great artistry.<sup>22</sup> Although *qompi* clearly does include tapestry-woven textiles, it also appears to be a qualitative term, denoting use of superior fiber (vicuña or young alpaca), superior spinning, and dyeing.

Some authors, including Cobo, make the point that *qompi* is equally finished on both faces. This characteristic, however, occurs not only in Inca tapestry but also in Inca textiles woven in other techniques, including plain-weave stripes, patterning in two complementary sets of elements, and warp-faced double cloth. Coarse undyed Inca textiles as well as finely woven ones are the same on both faces. The significance of this quality in European accounts of fine Inca cloth probably derives mostly from the fact that European luxury textiles of the period, such as tapestries and patterned silks, have definite right and wrong faces.

In addition to *qompi* and *'awasqa*, Cobo mentions a cloth woven of very thick yarns used for blankets or rugs, called *chusi*, and at the other end of the scale, extremely rich fabrics decorated with colorful feathers or gold or silver beads.<sup>23</sup> As an example, he notes some featherwork with tiny iridescent gold and green feathers from hummingbirds. The featherwork was worn primarily for fiestas by the nobility. Apart from a few feathered items found in religious offerings, examples of these fabrics do not seem to have survived archaeologically.

Cobo says that *qompi* was woven on a vertical loom. Guaman Poma illustrates an indigenous man of the Colonial Period working on such a loom, holding in his hand a comb of the type often used to beat down tapestry weft yarns (fig. 7). An actual comb of this type, made of bone, was found at the Inca site of Sacsahuaman.<sup>24</sup> Guaman Poma's weaver is also shown with three bobbins of yarn, which also suggests tapestry weaving. In addition, there is a miniature representation of a vertical loom with a cloth of Inca design on a Chimu-Inca ceramic vessel.<sup>25</sup> The use of a vertical loom for Inca weft-faced fabrics is plausible since this type of loom is the most practical for wide fabrics, and these Inca textiles tend to be wide. In addition, the fixed tension provided on such a loom facilitates weft-faced weaving.

Guaman Poma's drawing shows the ends of the warp bound to the loom bars, as is typical in Peruvian looms. Although Colonial Period Peruvian tapestries with European designs often have longer warps (as in Guaman Poma's drawing), the warp lengths of Inca weft-faced textiles are short, often less than a meter. The weft width

Fig. 7. Man weaving tapestry on a vertical loom. Although the scene is from the Colonial Period, it is probable that earlier Inca tapestry looms were similar, although they would have been wider than high (Guaman Poma, p. 647).



Fig. 8. Thirty-three-year-old woman weaving on a back-strap loom (Guaman Poma, p. 215 [217]).





is usually greater than the warp length. It appears that no system of rolling up either the unwoven warp or the woven fabric was used.

Guaman Poma shows ordinary highland women weaving on the backstrap loom (fig. 8), which is the style of loom that still predominates in Peru north of Cuzco, throughout the highlands and on the north coast. Since Guaman Poma lived near the city of Huamanga, modern Ayacucho, which is west of Cuzco, he was presumably drawing the domestic loom style most familiar to him. The constant changes in tension that occur in weaving on such a loom naturally produce a warp-predominant or warp-faced fabric, as is the case with the modern fabrics produced in this area. Cobo, on the other hand, in explaining how *'awasqa* is woven, describes a loom secured to four stakes in the ground, which is a loom style found south of Cuzco today. This loom is also used today to produce warp-faced textiles.

It is possible that *'awasqa* and *qompi* might correspond roughly to the distinction between Inca warp-faced and weft-faced textiles found in the surviving examples. Belts are a likely exception, however, since they are always warp-faced but can be woven more or less finely with dyed or undyed yarns.<sup>26</sup>

Although, as noted above, women were responsible for domestic weaving, Inca cloth was also woven by at least two other categories of persons, namely male specialists and cloistered women.<sup>27</sup>

Inca officials visited all villages and classified girls at about the age of ten. The most beautiful girls were chosen to be educated in convent-like houses in the provincial capitals. Here they learned weaving, cooking, and other household occupations. Presumably, they were taught Inca weaving techniques. Some of these girls were sacrificed. After about four years of training, some were given as principal or secondary wives to nobles, or as concubines to the emperor, while others were dedicated to religious service. The latter continued to live in the convents and were supposed to be chaste: these were the cloistered women (*mamakuna*). They wove fine textiles for sacrifices and for the emperor, prepared food and drink for festivals, and tended the shrines. Several sources note that their food and clothing was supplied to them out of government storehouses.<sup>28</sup> Sacrificial cloth was most often burned, sometimes thrown into a body of water, and sometimes buried, either by itself or as clothing for figurines or human sacrifices.

The specialized male *qompi* weavers (*qompi-kamayoc*) have been frequently mentioned in previous literature. However, the available lists of specialists also include weavers of *'awasqa* (*'awa-kamayoc*), as well as dyers.<sup>29</sup> The sources also list feathered garment makers and sandal makers, each in two categories, for fine and for ordinary examples. Guaman Poma also mentions men who sewed, probably referring to seaming and edge binding.<sup>30</sup>

The materials used by these specialists were supplied out of government storehouses (in turn provisioned from government herds and lands), and their production was turned in to the government. Like other tribute, this cloth was kept in the storehouses to be distributed at need, for example, for provisioning the army or for diplomatic gifts, which were given by the emperor in return for a variety of services. Nobles were given gifts of *qompi* and commoners of *'awasqa*. Both men's and women's clothing was produced and stored in this system, though men's costume seems to have been distributed in more different contexts.

Although Garcilaso and Cobo (who may have been using Garcilaso as a source) mention only specialist weavers as contributing to government stores, other Spanish writers suggest that ordinary taxpayers in some provinces were responsible for producing one garment per year for government use.<sup>31</sup> One of these authors also indicates that tunics and mantles were assigned to separate areas.<sup>32</sup> Again the materials for these garments were supplied from government stores. In provinces where women did the domestic weaving, such a garment would have generally been woven by the taxpayer's wife. Presumably, such garments would be more likely to have provincial features than those made by specialists.

## Women's Costume

Cobo describes the basic garment as a large square fabric covering the body from the neck to the feet but not the arms. It was worn wrapped around the body under the arms and with the edges pulled over the shoulders, where they were fastened with pins. Guaman Poma shows young girls wearing this garment shorter than adult women (fig. 9).<sup>33</sup> It is secured at the waist with a wide belt. Over this wrapped dress, women wore a shawl, which Cobo describes as hanging halfway down the leg and pinned on the chest. Women also wore a headband. Cobo



Fig. 9. Twelve-year-old girl, shown wearing a shorter wrapped dress (Guaman Poma, p. 225 [227]).



Fig. 10. Inca wrapped dress excavated by Max Uhle from the cemetery of the sacrificed women at Pachacamac, brown with white stripes. Warp-faced plain weave, cotton fiber. 1.65 (warp) x 1.52 m. University of Pennsylvania Museum, Philadelphia 31674 (Uhle number 2455) (neg. # S4-142168).



also notes a further detail, omitted by most other authors, that across their chest, from one shoulder to the other, they wore strings of bone and shell beads of various colors. The drawings of Guaman Poma (figs. 1, 8) illustrate the general effect of this ensemble.

## Wrapped Dresses

In early dictionaries and in Guaman Poma, who was a native speaker, the term '*aqsu*', usually written by the Spanish as *acsu* or *acxo*, is used for the wrapped dress worn by Inca women in the Cuzco area.<sup>34</sup> Another term, '*anaku*', usually written by the Spanish as *anaco*, is more generic and associated mainly with provincial costume in the northern part of the empire.<sup>35</sup> In colonial sources with less lexicographic authority, the two terms seem to become interchangeable to some degree, though the general south-north division remains discernible. Today, *anaku* is consistently used in northern Peru and Ecuador and *aksu* or *aqsu* in Inca-speaking areas of Bolivia.<sup>36</sup>

There are two styles of the Inca wrapped dress that have been archaeologically preserved, each style including both miniature and full-sized examples and fine and coarse examples. One style is square, as Cobo and some other sources describe, and the other style is rectangular and worn folded in half with the fold at the shoulders. The two styles are pinned and belted in the same way.

The square style was found by Max Uhle in his 1896 excavations for the University Museum in Philadelphia at Pachacamac, a major temple and oracle on the central coast of Peru, south of Lima (fig. 10).<sup>37</sup> Uhle's Inca women's burials were in a cemetery for sacrificed women on a terrace at the Inca temple. The women were adults (one with gray hair) and had been killed by strangulation with a knotted cloth around the neck.<sup>38</sup> These graves included Inca style ceramics, and most of the fabrics form a striking contrast to those found in other burials at the site. Uhle suggests that the variety of cranial modifications found meant that women from several highland provinces were represented.

Unfortunately, Uhle does not provide any detail about how the clothes were placed on the body or about which textiles were on individual bodies. He merely identifies the function of the cloths in his report, presumably based on archaeological evidence that he otherwise does not mention; his identifications can be confirmed by other evidence.



A letter of Uhle's kept in the University Museum archives provides a summary description of the general disposition of the Inca burials:

The bodies are wrapped simply and in irregular order in a number of cloths, which are merely tied into a couple of knots. Often three hip-girdles were crossed over the knees, hips and breast, in order to keep the body in its posture. Rarely were the bodies placed upon a folded mat, and still more rarely was the body steadied by small lattices of sticks.<sup>39</sup>

Although he does not here specify that the bodies were flexed, it seems likely that they were. He compares the mummies to other Inca ones found elsewhere at the site, which were "bales of irregular shape, wrapped in large square cloths, five feet by six feet in size and not sewed together along the edges."<sup>40</sup>

The wrapped dresses from the graves of the sacrificed women at Pachacamac are made of two loom panels, sewed together at the sides to form a square ranging from 1.52 to 1.80 m in size (fig. 10). They are mostly rather coarse and appear to be warp-faced plain weave. They are undyed, and most are dark brown with a white, tan, or black (warp-striped) border on the outer edges. Uhle found thirteen examples, six of camelid fiber and seven of cotton.<sup>41</sup> Some examples are overcast along the weft selvages, with cross-knit loop stitch around the corners and along the warp selvages. Other examples have only the loop stitch binding and lack a finish on the weft selvages, or lack edge binding entirely.

This square style of wrapped dress has also been found in other contexts. For example, in his excavations at the site of Old Ica in the Ica Valley for what is now the Phoebe A. Hearst Museum of Anthropology, Uhle found an example that is much more finely woven (fig. 11). It is of camelid fiber, purple with tan border stripes, and purple edge binding, 1.575 x 1.60 m. It has chained warp loops on the ends, indicating that it is weft-faced plain weave, with weft stripes. He found another finely woven example, of cotton, blue with tan edge stripes, in an Inca occupation period grave at Old Ica (4-5422a, grave Tk). It is fragmentary, with the center seam missing, but the outer selvages opposite the seam lack any special finish. However, the thread count is relatively high, 101 yarns per cm in the direction of the stripes and 12.5 yarns per cm in the opposite

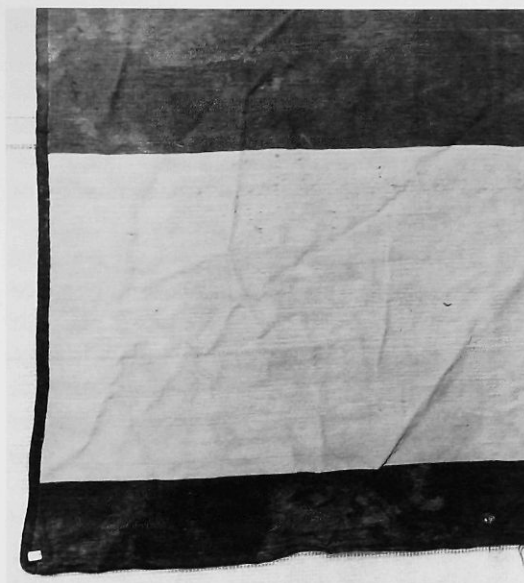


Fig. 11. Detail of the corner of an Inca wrapped dress found by Max Uhle in the Chulpaca cemetery at the site of Old Ica in the Ica Valley, dark purple with tan border. Weft-faced plain weave, camelid fiber. Overall size 1.575 x 1.60 m. Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley 4-4463.

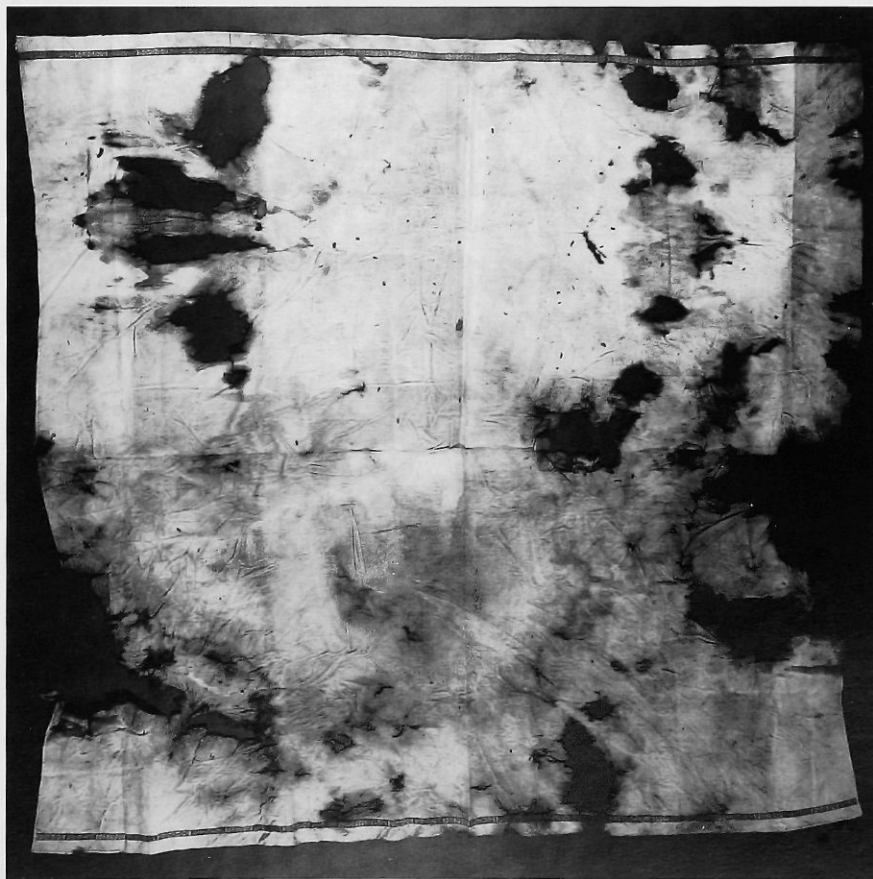


Fig. 12. Inca wrapped dress excavated by Max Uhle from the cemetery of the sacrificed women at Pachacamac. Weft-faced plain weave (white cotton) and complementary-weft patterned stripes (red and yellow camelid fiber). 1.72 x 1.81 m. University of Pennsylvania Museum, Philadelphia 31663 (Uhle number 2456) (neg. # S4-142169).



direction. This piece was found folded, not dressing the body. In addition, a cache of Inca style tribute fabrics, including wrapped dresses of this style, was found at a site near Tambo Viejo in the Acari Valley.<sup>42</sup> Among the published figurines, only one, of unknown source, has this style of wrapped dress.<sup>43</sup>

Although all these examples are entirely plain weave, Uhle also found a fine white (cotton plain-weave areas) wrapped dress at Pachacamac, with a single narrow Inca style complementary-weft patterned band near each of the two ends (fig. 12).<sup>44</sup> Chained warp loops are clearly visible on the end selvages. The complementary-weft zigzag design is identical to those found on the folded dresses and on other Inca style textiles. The two panels are sewn together on their end selvages, for a completed size of 1.72 x 1.81 m. The piece has an incomplete

white edge binding. However, no other two-panel wrapped dresses with weft patterning have been reported to date.

All of Guaman Poma's drawings show Inca women's wrapped dresses with horizontal bands, as do Inca style ceramics with schematic representations of women.<sup>45</sup> It is likely that the manner of putting on these garments was basically the same as that used for old style women's wrapped dresses in the Colta area of Chimborazo province in Ecuador, that is, with a tuck taken at the waist to adjust the length.<sup>46</sup> Guaman Poma invariably draws a vertical line down the lower part of the garment on each side, to represent folds in the fabric to adjust its fullness.<sup>47</sup>

The miniature wrapped dresses found on most Inca figurines are the style worn folded in half (fig. 13). The embroidered edge binding on both dyed and undyed pieces lacks the striping found on the shawls (figs. 13-15). The ones with undyed yarns have a white center section and on each side of that a dark brown section with black stripes running through it, but one end stripe is white and the other is tan.<sup>48</sup> The examples with dyed yarns, however, are symmetrically patterned, with the same color in the center as on both ends, which in turn matches the color of the edge binding (figs. 13-15).<sup>49</sup> White is the most common color for these areas (fig. 13), but yellow (fig. 14) and green (fig. 15) examples are also known.<sup>50</sup> The central portion of each half is red, with two complementary-weft patterned bands through each red section.

The amount of detail in the complementary-weft patterning varies among the available examples. Some have a simple zigzag and dot design (figs. 13, 14), while others have short zigzags within rectangles of interchanging color (fig. 15). Some examples have a triple stripe in the bands closest to the center (figs. 13-15), while others have a single patterned stripe in this position.

Full-sized examples of wrapped dresses similar to those on the figurines have only recently come to light. A complete example of the undyed style (fig. 16), found at Pica in what is now highland Chile, proved to be 1.60 x 2.46 m in size and made of three loom panels, the center one plain white (66 cm wide) and the end panels striped (each 90 cm wide).<sup>51</sup> The long dimension is such that it would have to be folded through the center panel, as on the figurines, in order to be worn with the stripes horizontal. Since the end panels show slight wear and the center panel is pristine, the possibility exists that the center panel might

Fig. 13. Miniature Inca wrapped dress shown with original shoulder fold, white center and ends. The pins have been removed and reinserted. The dress has plain bottom selvages, but occasional loose ends on the surface suggest weft-faced weaving. Camelid fiber warp and weft. 8 x 14.7 cm as shown. Private collection.

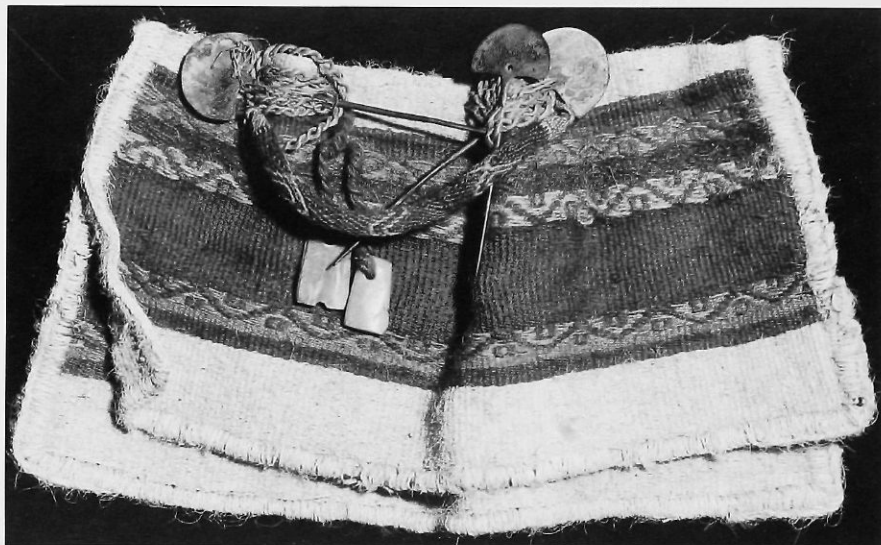


Fig. 14. Miniature Inca wrapped dress shown opened out, yellow center and ends. Probably weft-faced, cotton warp, camelid fiber weft. 15 x 15 cm. Neg. # 602636-8, Courtesy Department of Library Services, American Museum of Natural History 41.2/7886.





have been an ancient replacement.

The lack of chaining on the edges parallel to the stripes and the occasional discontinuous weft suggest that the piece is warp-faced.<sup>52</sup> The thread counts are 38–45 warp by 9–10 weft yarns per cm in the center section, and 40–47 warp by 7–8 weft yarns per cm in the sides. A fascinating refinement in the construction of this garment is that the weft yarns change color from brown to white toward the white edges. The colors of fibers are mixed at the transition, suggesting that the color change was effected during the process of spinning the yarn.

The girl sacrificed on Mt. Ampato in Peru is wearing a wrapped dress that lacks patterned stripes but is woven from dyed yarns, purple on the ends and center, with wide yellow stripes and narrow red stripes.<sup>53</sup> The stripes are symmetrically arranged. This example differs from the two kinds of wrapped dresses on figurines in being woven of dyed yarns and symmetrically patterned, but lacking complementary-weft patterning.

A full-sized example with patterning in complementary sets of elements, with yellow center and ends, was found as a wrapping for an offering of macaw feathers on top of the old temple at Pachacamac.<sup>54</sup> This piece is similar in size to the one from Pica and also is made in three sections. Its patterning corresponds to that

of the most elaborate miniature examples, with triple stripes in complementary sets of elements toward the center and a single patterned stripe toward the bottom. Another full-sized example with patterning in complementary sets of elements was found in the sacrificial burial of two women on Mt. Esmeralda, Iquique, in Chile, but it has not been completely described.<sup>55</sup>

Although I have not had the opportunity to study the Pachacamac or Esmeralda wrapped dresses in person, I have examined two fragmentary examples patterned with complementary sets of elements.<sup>56</sup> One was found at the site

Fig. 16. Full-sized Inca wrapped dress shown opened out, found at Pica in what is now highland Chile. Warp-faced plain weave in undyed camelid fiber. 1.60 x 2.46 m. Private collection.

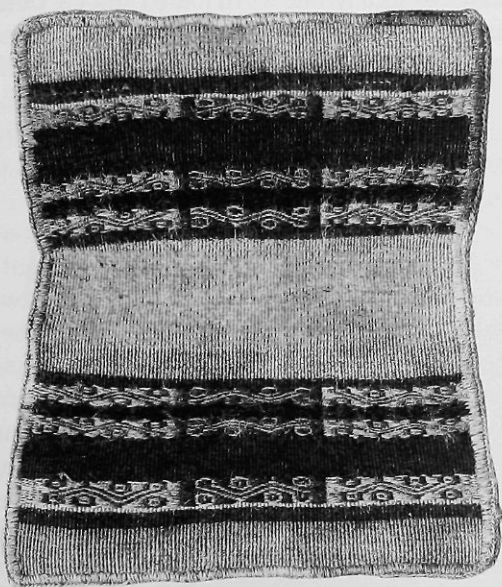


Fig. 15. Miniature Inca wrapped dress shown opened out, green center and ends. Probably weft-faced, camelid fiber warp and weft. 15 x 13 cm. The Brooklyn Museum 41.1275.109, Museum Expedition 1941, Frank L. Babbott Fund.

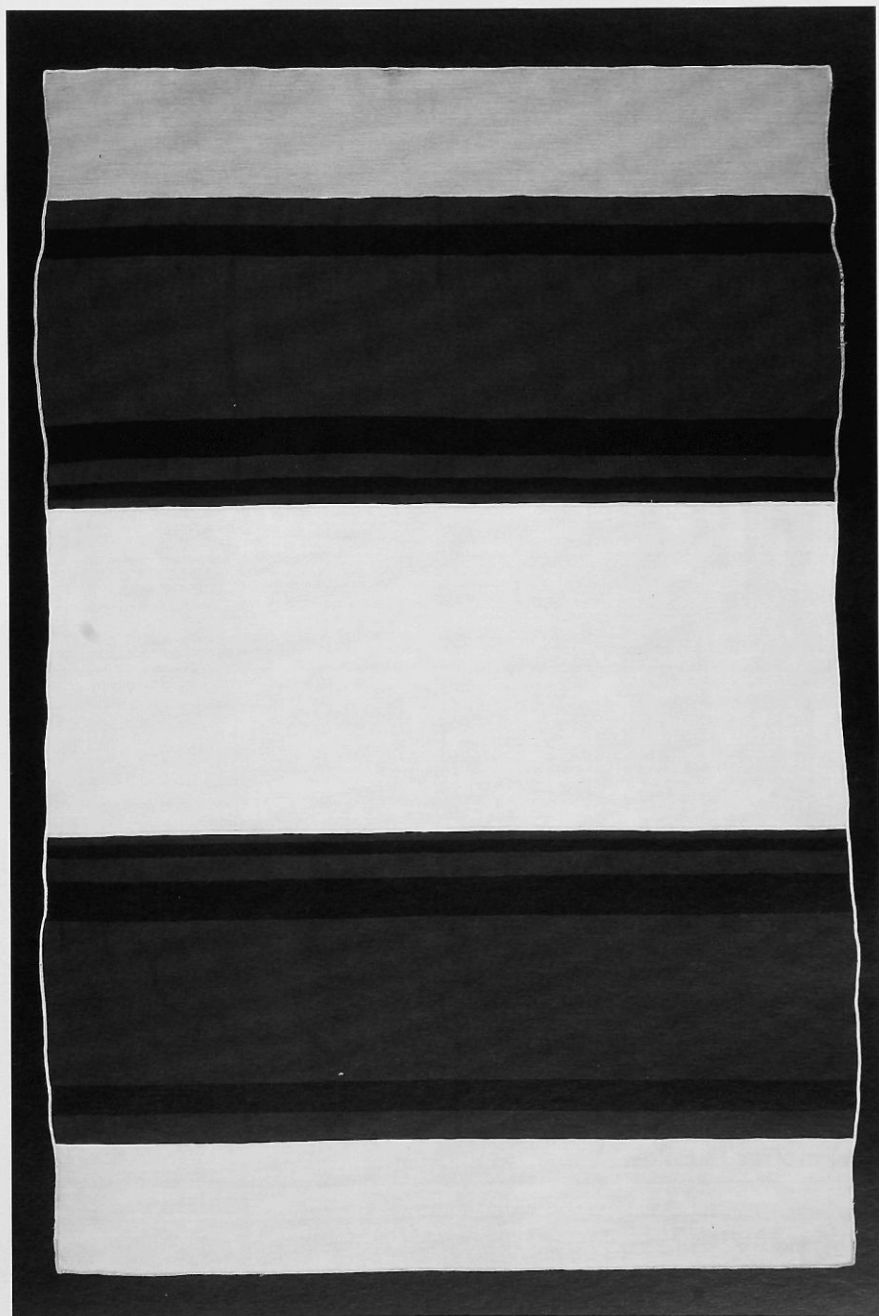






Fig. 17. Fragmentary Inca wrapped dress found at Chiuchiu, Chile, with white center and ends. Weft-faced plain weave and complementary-weft patterned stripes, cotton warp, camelid fiber weft. 84 x 51 cm. Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington, catalog no. 312131 and 312135c.

of Chiuchiu in northern Chile (fig. 17) and is extraordinarily finely woven, with as many as 150 weft yarns per cm. One end selvedge with chained warp loops is preserved, so it is certainly weft-faced. By comparison with the layout of the Pachacamac example, it appears that this end would have originally been seamed to the center panel. The ends and edge binding are white. Within the red area are black and white stripes as well as patterned ones.

Another fragment was found by Max Uhle in an Inca occupation period grave at Old Ica (fig. 18). It has a black end and edge binding, but

otherwise the colors are the same as in the other examples. It lacks any special treatment on the selvedge parallel to the stripes, and it is much coarser, 8 elements by 42 elements per cm. The hidden elements are camelid fiber, two-ply and not very tightly twisted. It is therefore possible that the piece is warp-faced. It was cut down and hemmed in antiquity, so the person with whom it was buried was not using it as a wrapped dress.

Other early Colonial Period accounts besides that of Cobo describe the woman's wrapped dress as square (*cuadrada*).<sup>57</sup> In addition, both Guaman Poma's drawings and representations of women on Inca pottery depict wrapped dresses with a broad stripe near the lower edge like the square examples, not with the more complex striping seen on the folded ones. Square wrapped dresses also form the majority of the surviving full-sized examples, found in a variety of contexts. They thus seem more likely to have been the style worn by women on a daily basis. Since the folded dresses are associated primarily with figurines, human sacrifices, and other religious offerings, they may well be a special ceremonial form.

## Shawls

There is only one Inca term for the woman's shawl, *lliklla*, which the Spanish usually wrote as *lliclla* or *liquida*.<sup>58</sup> Again at least two kinds survive archaeologically, one worn folded and the other unfolded. The surviving undyed warp-faced examples are mostly the unfolded style, while the dyed weft-faced examples are mostly the folded style, but the same styles are found on the figurines as in Inca graves from the Peruvian coast.

The undyed shawls on the figurines are relatively narrow rectangles with three lengthwise stripes of approximately equal size, the two outer stripes of matching color (fig. 19). They have solid overcasting on the long sides, and striped cross-knit loop stitch on the corners and ends. Some examples have a narrow stripe patterned in bars of alternating colors of yarn along the long selvedges. The shawl of this type on the figurine found on Mt. Copiapó in Chile, which has been the most carefully reported, was worn unfolded with the stripes horizontal.<sup>59</sup> In addition, all of Guaman Poma's drawings in which the shawl has any pattern show horizontal striping in thirds.

The majority of the shawls found by Uhle in the graves of the sacrificed women at



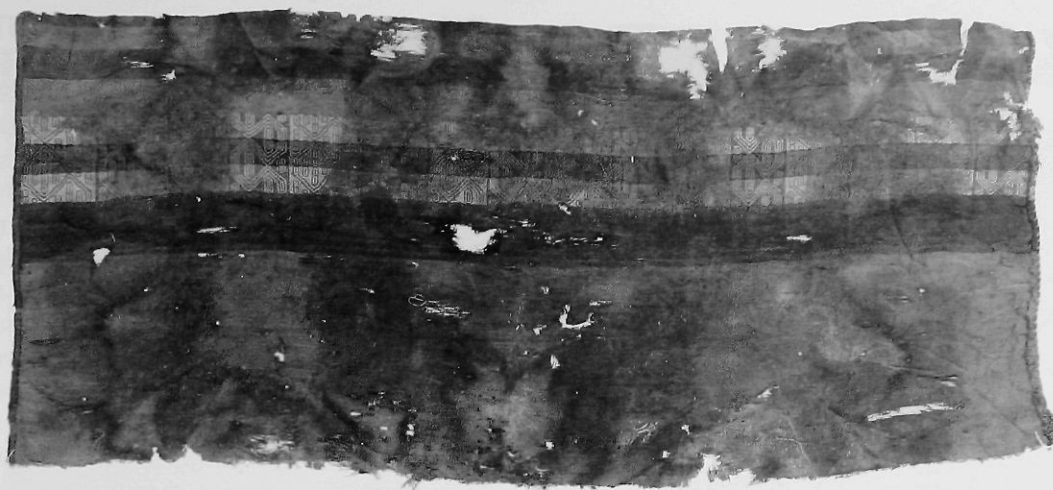


Fig. 18. Fragmentary Inca wrapped dress excavated by Max Uhle in the Soniche cemetery of Old Ica, grave Tm, with black center and ends. Possibly warp-faced, camelid fiber warp and weft. .43 x 1.02 m. Phoebe A. Hearst Museum of Anthropology, University of California, Berkeley 4-5447e.

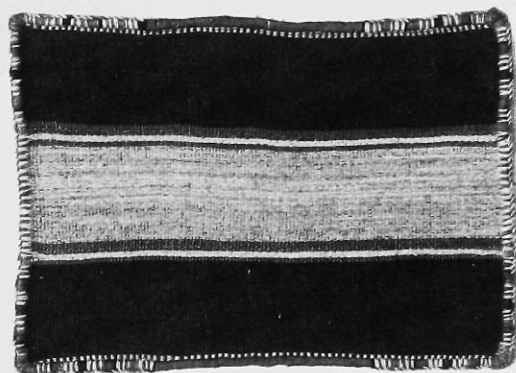


Fig. 19. Miniature Inca shawl with gray center and brown outer stripes, but separating stripes and edge binding in red, yellow, and green. Warp-faced plain weave (occasional discontinuous weft yarns are evident). Camelid fiber warp and weft. 12 x 17 cm. The Brooklyn Museum 41.1275.111, Museum Expedition 1941, Frank L. Babbott Fund.

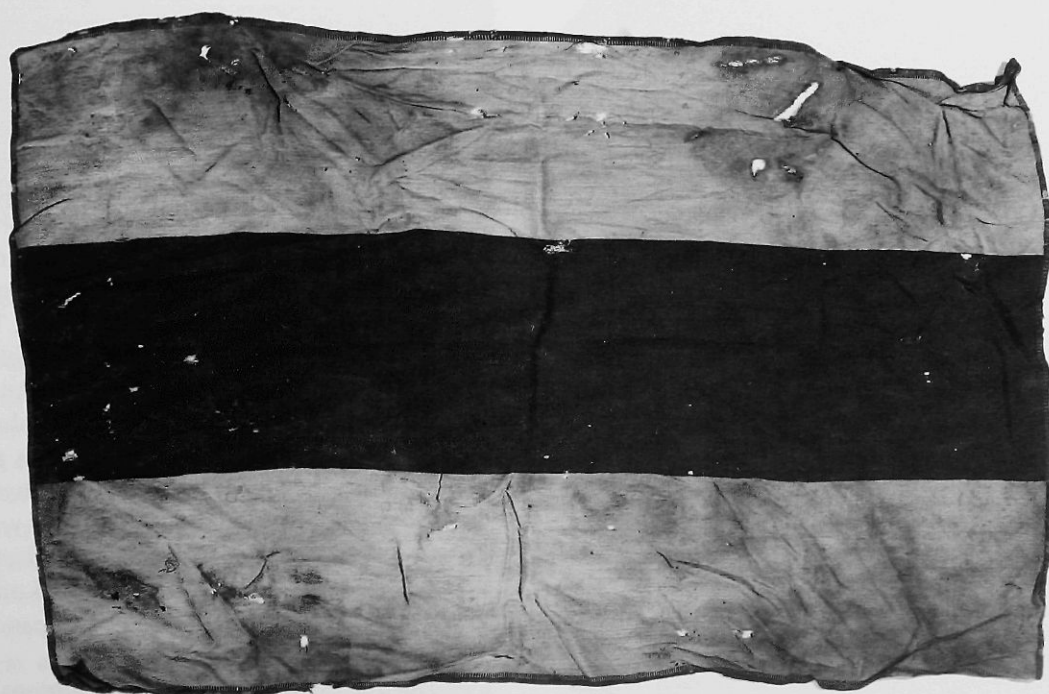


Fig. 20. Inca shawl excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac, with brown center and cream outer stripes, dyed camelid fiber edge binding. Warp-faced plain weave in camelid fiber. 1.12 x .71 m. University of Pennsylvania Museum, Philadelphia 31645 (Uhle number 2460) (neg. # S4-142166).



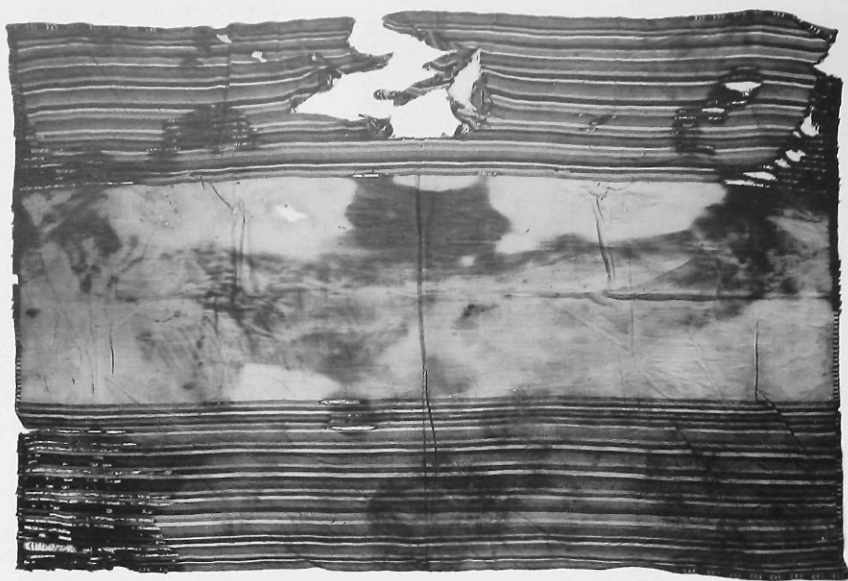


Fig. 21. Inca shawl excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac, with tan center and shades of brown outer stripes, undyed cotton edge binding. Warp-faced plain weave in cotton. 1.11 x .78 m. University of Pennsylvania Museum, Philadelphia 31658 (Uhle number 2465) (neg. # S4-142178).

Pachacamac are of this kind (figs. 20, 21). They are a single loom panel, ranging from 96 to 113 cm in length and 71 to 80 cm in width, and appear to be woven in warp-faced plain weave. Both the side stripes and the center one may be either light or dark or composed of narrower stripes.<sup>60</sup> Some examples have a narrow stripe with alternate colors of warp near the side edges. Most examples are of undyed yarns, brown and white. Some of those with narrow stripes include some blue. Thirteen are of cotton and three are of camelid fiber. Uhle also found one slightly more colorful camelid fiber example elsewhere at the site, which he recognized as of smaller than normal size (62 x 47 cm), and thus probably for a young girl (fig. 22). It is similar to the miniature in figure 19 but with a black center section and has two pin holes along one long edge.

Two relatively finely woven cotton shawls of this style are in the Museum of Art and Archaeology, University of Missouri-Columbia (88.96 and 88.97).<sup>61</sup> One has a tan center and striped outer bands, while the other has a striped center and salmon-colored outer bands. The latter includes blue and green narrow stripes in addition to the white, brown, and dark brown ones. The dyed colors are again associated with finer weaving. The edge bindings of both shawls are in camelid fiber. Both shawls have seven fold lines perpendicular to the stripes and one down the center, probably from the way they were stored at the time of burial. The cache of Inca style tribute textiles from a site near Tambo Viejo in Acarí also included shawls in this triple stripe style.<sup>62</sup>

An example of a tapestry-woven shawl in this style, about 81.5 x 124.5 cm in size, larger than any of Uhle's plain shawls, has recently come to light (fig. 23).<sup>63</sup> As would be expected in an Inca weft-faced textile, the warp is in the short direction of the cloth. The center stripe is red, and the outer stripes are composed of a grid divided into triangles of dark red and blue. The weave is fine interlocked tapestry resembling that found in Inca men's tunics. The piece appears to be woven in a single panel. This shawl is the first known tapestry-woven woman's garment. In fact, the layout does resemble that of some shawls depicted by Guaman Poma as worn by some of the wives of the emperors, but in which the center stripe is the decorated one.<sup>64</sup> These shawls are also obviously larger than the warp-faced examples.

The dyed shawls found on the figurines are a different style, larger, and worn folded almost

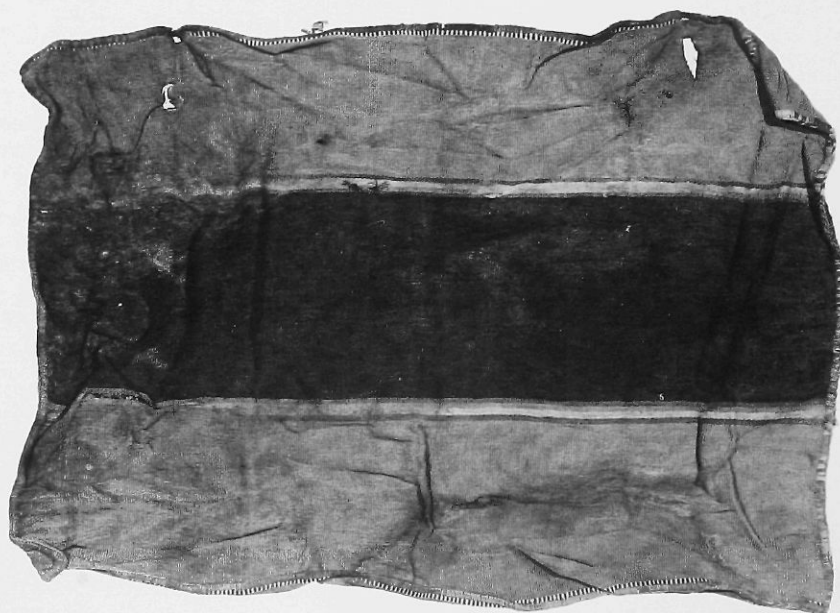


Fig. 22. Inca shawl excavated by Max Uhle at Pachacamac, in an upper stratum under the front terrace of the temple, with black center and brown outer stripes, with separating stripes and edge binding in red, yellow, and green. Warp-faced plain weave in camelid fiber. 62 x 47 cm. University of Pennsylvania Museum, Philadelphia 27544 (Uhle number 1011) (neg. # S4-142173).



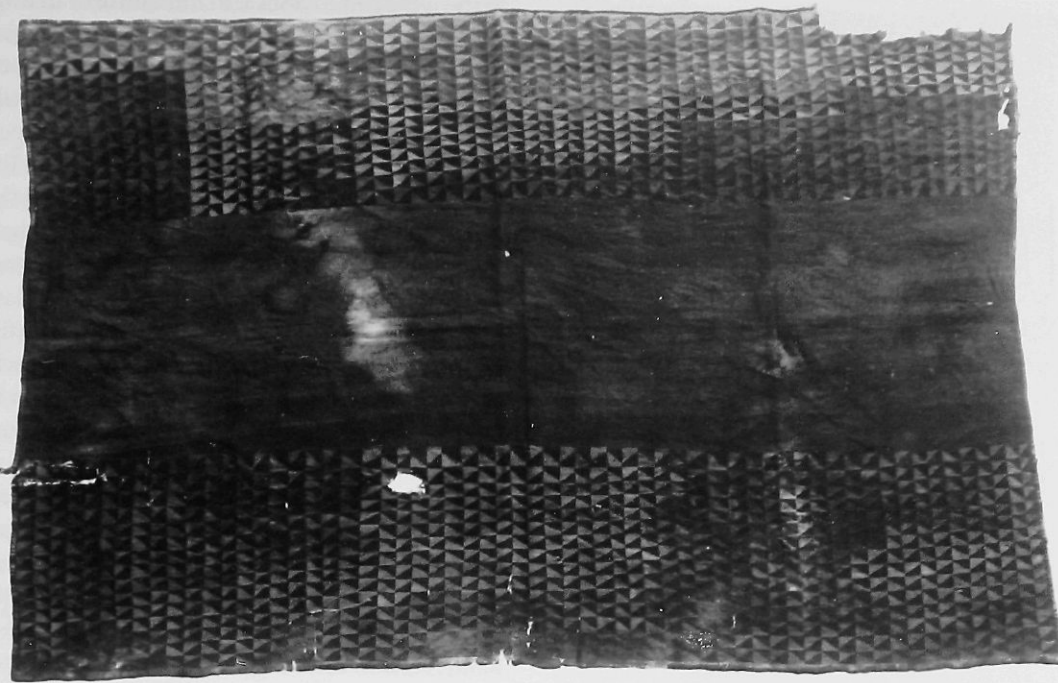


Fig. 23. Inca shawl in tapestry weave, with red center and red and blue outer stripes. .815 x 1.255 m. Museo Regional de Ica.



Fig. 24. Miniature Inca shawl, with white center, matching the dress shown in figure 13. The selvages are invisible but occasional surface loops confirm weft-faced weaving. Camelid fiber warp and weft. 14 x 13.5 cm. Private collection.

in half in the middle parallel to the stripes (figs. 24–26). They are red on the ends with one complementary-weft patterned band through each red area, and a contrasting color in the center, usually white (fig. 24) or yellow but sometimes green (fig. 25) or black (fig. 26).<sup>65</sup> The edge binding is similar to that on the unfolded shawls. The woven designs are similar to those on the wrapped dresses, and in many cases a wrapped dress and shawl have clearly been made to match (figs. 13 and 24, figs. 15 and 25). Although the shawls may therefore be confusingly similar

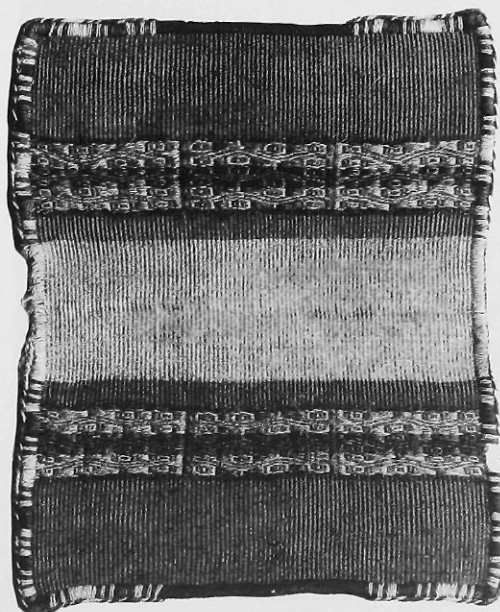


Fig. 25. Miniature Inca shawl, with green center, matching the dress shown in figure 15. On the ends, the warp yarns extend slightly beyond the edge, confirming weft-faced weaving. Camelid fiber warp and weft. 14 x 12 cm. The Brooklyn Museum 41.1275.110, Museum Expedition 1941, Frank L. Babbott Fund.



Fig. 26. Miniature Inca shawl, with black center. Probably weft-faced. Camelid fiber warp and weft. 27 x 23.5 cm. The Brooklyn Museum 41.1275.107, Museum Expedition 1941, Frank L. Babbott Fund.

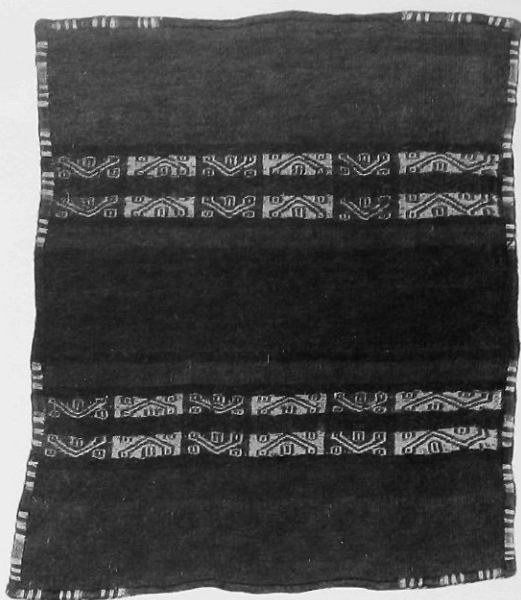
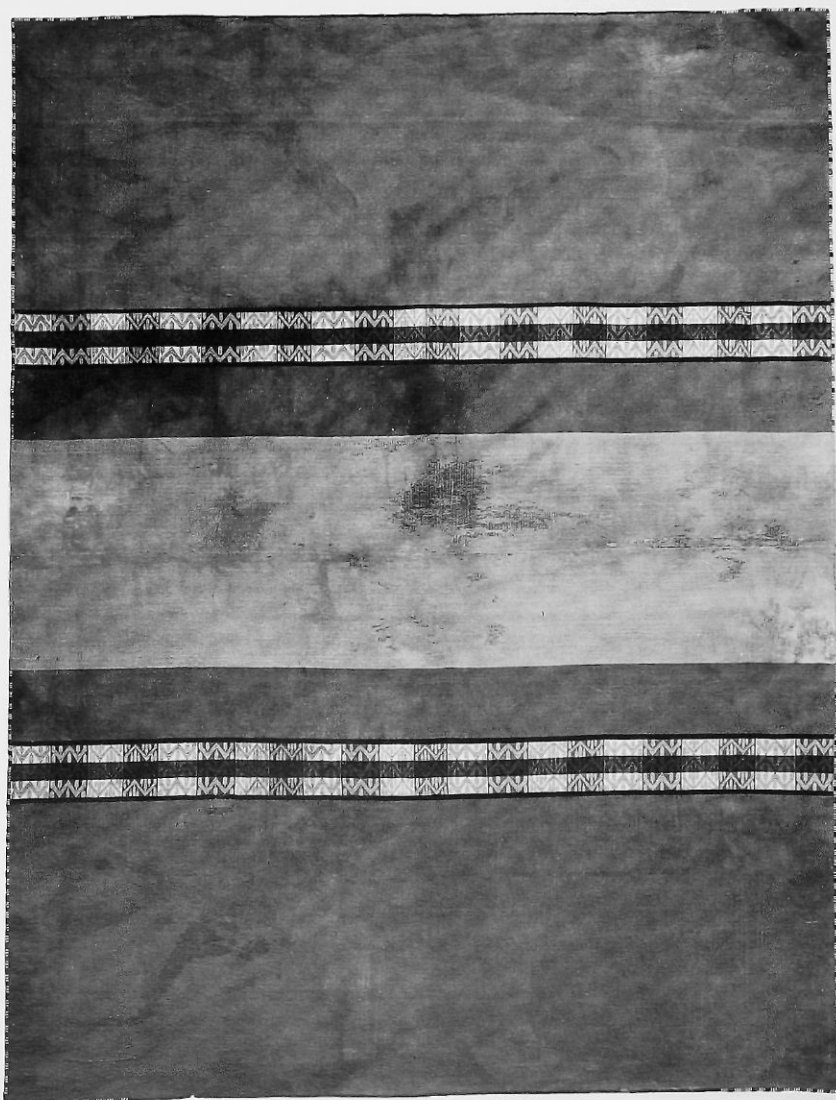


Fig. 27. Full-sized Inca shawl, with brown center. Weft-faced plain weave and complementary-weft weave stripes, cotton warp (3-ply), camelid fiber weft. 1.68 x 1.27 m. The Textile Museum 91.366.



to the wrapped dresses if in miniature or in fragmentary condition, they can be distinguished according to the criteria mentioned: (1) wrapped dresses have monochrome edge binding while shawls have striped edge binding; (2) wrapped dresses have the same color at the ends as in the center, while shawls have red extending to the ends; (3) wrapped dresses have two zones of patterning in each half, while shawls have only one.

The Textile Museum has a complete full-sized shawl of this style in its collection (fig. 27), and several other examples are also known. The Textile Museum example is 1.68 x 1.27 m in size, the largest known, and is made in two loom panels (warp length of 84 cm). The warp is cotton, but the weft, including the brown central section, is camelid fiber, and the weaving is very fine, with 16 warp and 90 weft yarns per cm. A fragmentary example that was originally of similar size (warp length of 72.5 cm) and with a white center section was found by Bandelier at the site of Armatambo, near Lima on the central coast of Peru (fig. 28).<sup>66</sup> Chained warp loops are visible on the end selvages of both of these examples.

A smaller complete example, 111 x 70 cm, with 8 warp and 66 weft yarns per cm, has a yellow central section (fig. 29).<sup>67</sup> Uhle also found a similar fragmentary example, with a white central section, in the graves of the sacrificed women at Pachacamac, of which the reconstructed size is 104 x 83 cm (fig. 30).<sup>68</sup> Chained warp loops are visible on the remaining outer end. The warp is cotton. The frozen sacrificed girl found on Mt. Ampato in Peru was also wearing this style of shawl, with a white center.<sup>69</sup> The amount of variation in the size and proportions of these folded red shawls in comparison with other Inca garment types is striking.

Another cloth from Pachacamac that Uhle describes as a shawl has two loom panels, each measuring .62 x 1.135 m, sewn together for a total length of 1.24 m (fig. 31). Chaining is visible on the outer warp selvages. The piece is thus weft-faced plain weave, of white cotton with a narrow blue edge border, and a fine purple camelid fiber stripe at a slight distance from the edge. It has striped edge binding similar to the other shawls but with red and yellow striping on most of the weft selvedge length. There are holes with copper stains caused by the use of a pin, suggesting that the shawl was worn folded off center. No other examples of this style of shawl are known to date.



As was the case with the complementary-weft patterned wrapped dresses, the folded style of shawl is not depicted by Guaman Poma. Again one wonders if it might have had a primarily ceremonial function. One early Spanish source describes a ceremony in Cuzco in which a priest of the Sun gives garments to a group of young women chosen to serve young men during their initiation.<sup>70</sup> The garments include an *acso* of red and white, called *angallo*, and a *lliclla* of the same type, as well as a bag-like cap, open on both ends. These garments are specified as having been woven as tribute for the Sun. Another passage in the same source, describing the woman's puberty ceremony, says that after her fast she puts on an *angallo acso* (as well as the bag-like cap), this time specified as white.<sup>71</sup> An early dictionary defines *ancallo* (orthographic spelling: '*ankallu*') as old style women's garments, very fine.<sup>72</sup> It is tempting to suggest, though by no means certain, that the term might refer to the type of folded garments (both shawls and wrapped dresses) described here. There is, however, no other evidence for the bag-like caps.



Fig. 29. Inca shawl with yellow center. Probably weft-faced plain weave and complementary-weft patterned stripes, camelid fiber weft. 1.11 x .70 m. Private collection, photograph ©Lois Ellen Frank.



Fig. 28. Fragmentary Inca shawl, with white center, found at the site of Armatambo, near Lima. Weft-faced plain weave and complementary-weft weave stripes, cotton warp (3-ply) and camelid fiber weft. 47 x 72.5 cm. Neg. no. 602636-3, Courtesy Department of Library Services, American Museum of Natural History, New York B/1225.

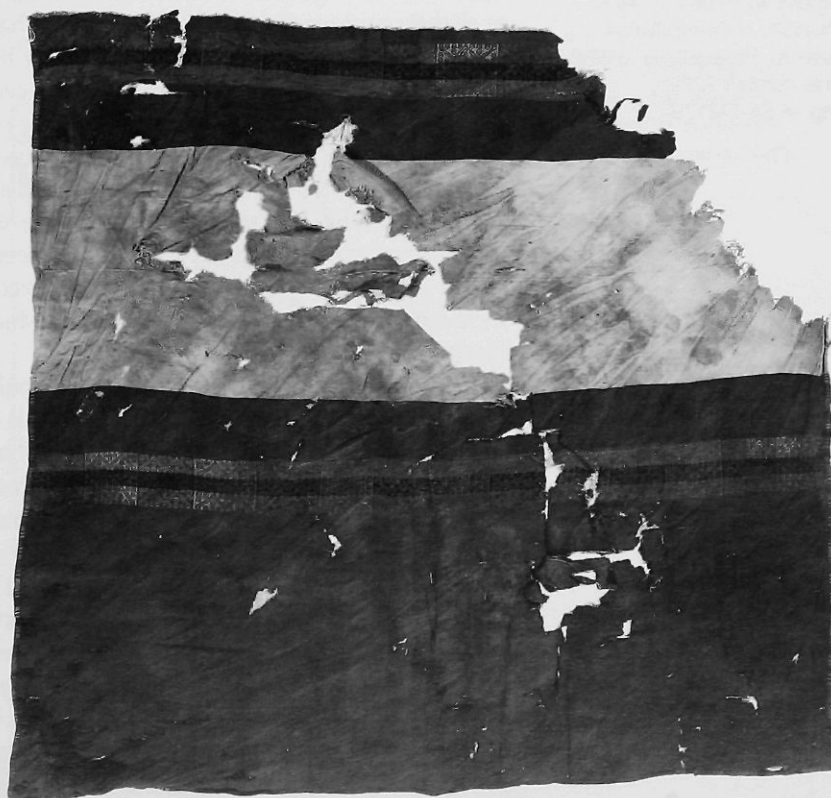


Fig. 30. Inca shawl excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac, with white center. Weft-faced plain weave and complementary-weft patterned stripes, cotton warp, camelid fiber weft. 71.5 x 80.5 cm. University of Pennsylvania Museum, Philadelphia 31646 (Uhle number 2467) (neg. # S4-142165).



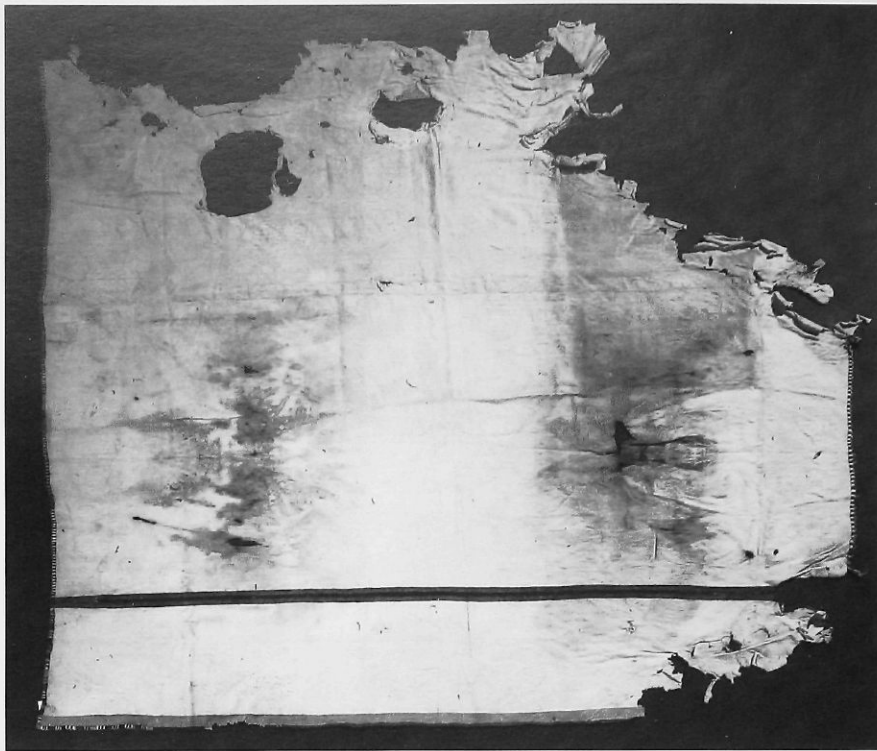


Fig. 31. Inca style shawl excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac. Weft-faced plain weave, cotton and camelid fiber. .99 x 1.145 m. University of Pennsylvania Museum, Philadelphia, 31662 (Uhle number 2229b) (neg. # S4-142179).

## Pins

The shoulder pins and shawl pins are the same shape, the head being a disk or a partial disk with the edge near the pin cut off straight or slightly concave (figs. 32, 33, 38). The disk has a hole near the pin through which it may be secured with a cord. Cobo says that pins ranged in length from 10 to 28 cm and were made of gold, silver, or copper. He also says that the outer edges were thin and sharp and could be used as knives.<sup>73</sup> Besides the pins found by Uhle at Pachacamac, full-sized examples have also been found in burials at Inca sites around Cuzco, including Sacsahuaman, Ollantaytambo, and Machu Picchu.<sup>74</sup>

In the miniature in figure 13, the two shoulder pins are 5.5 x 1.5 cm, while the shawl pin is 4 x 1.2 cm. This size difference is also apparent in the Copiapó figurine. Regarding full-sized pins, Uhle says that the shawl pins of the sacrificed women at Pachacamac are smaller than the dress pins.<sup>75</sup> The Pachacamac pins range between 15 and 19 cm long. In the burials at Sacsahuaman, when the size differed, there was a pair of larger pins, and one smaller one, so that the shoulder pins were again larger than the shawl pins.<sup>76</sup> Although Guaman Poma's drawings do not show shawl and shoulder pins on the same woman, his shoulder pins are also larger than

shawl pins on women of the same status, in this case by a more extreme differential.

Although most Spanish sources refer to all the pins as *topo* or *tupu* (orthographic spelling: *tupu*), the earliest Inca dictionaries refer to the dress pins as *tupu* and the shawl pin as *tipqui* (orthographic spelling: *t'ipki*), and again the shawl pin is described as small.<sup>77</sup>

Although many full-sized pins have been recovered, the associated cords have seldom been preserved or reported, except for that associated with the sacrifice on Mt. Esmeralda.<sup>78</sup> For this detail, the miniatures remain our best evidence. In several cases where the clothes have been removed from the figurines, the dress pins with their cord have been removed as a unit. On the back side of the pin, a knot in the cord prevents it from passing through the hole. One of Uhle's full-sized pins still has such a knot adhering to it.<sup>79</sup> Once the pin was put through the dress, the cord was wrapped around the entry and exit points between the pin and the cloth to secure it, as was recorded for the pins on the Mt. Copiapó figurine.<sup>80</sup> The shawl pins were apparently secured in a similar way, but the shawl pin cords do not have a decorative attachment. Both Guaman Poma's drawings (fig. 33) and the miniatures show that the dress pins were inserted with the points upward, while the shawl pins were inserted horizontally (generally right-handed).

The center portion of the cord connecting the two shoulder pins is patterned, evidently made with a tubular wrapped structure in camelid fiber. The *tupu* cord in figure 13 is divided into three sections, the outer ones with a purple ground and the center one red. The outer sections have a diamond design (two diamonds around the circumference) in red with yellow outlines. The center has a zigzag in purple with yellow outlines. The ends of the patterned section are tapered using an undyed brown plant fiber yarn (possibly *furcraea*) and continued into a twisted cord for wrapping around the pins. Suspended from the center of the cord are between two and four rectangular spondylus shell pendants. This cord with its pendants is probably what Cobo refers to as the jewelry across the chest. Guaman Poma illustrates this effect as well (fig. 33).

Although it was not possible to locate or identify cords that might have connected the *tupus* from among the materials found in the Inca women's graves at Pachacamac, there are shell pendants (fig. 34).<sup>81</sup> These consist of five to eight



strings of beads suspended from a common line. The beads on each string are black (probably a stone), pink, and white (both probably shell), with the color arrangement on each string matching the others in the same piece. At the tip of each string is a larger shell pendant. Shell pendants were also found in some graves at Sacsahuaman and Kenko.<sup>82</sup> The term given in early sources for these ornaments is *piñi*.<sup>83</sup> Some of the sacrificed women at Pachacamac also wore bead necklaces and bracelets, but these are probably provincial styles rather than Cuzco Inca.<sup>84</sup>

## Belts

The Inca woman's belt is called *chumpi*, usually written *chumbi* or *chunbe* in the early Spanish sources, and the same word is still used today.<sup>85</sup> The miniatures have individual belts that are relatively short and broad, usually woven in warp-faced double cloth with zigzag and dot or other geometric designs, with a narrow braided tie on each end (fig. 35).<sup>86</sup> On the Copiapó figurine, which has been the most carefully recorded, the belt was put on with the center in front, the ends taken around the back with the left over the right, and brought again to the front with the left again over the right.<sup>87</sup> The ties were then taken to the back and tied together with a square knot.

A full-sized belt of this kind, woven with dyed yarns, was found in the Inca sacrificial burial of two women on Mt. Esmeralda in Chile, and another full-sized example was found in an offering on the summit of Mt. Mismi in Peru.<sup>88</sup> Unassociated belts woven of undyed yarns in The Brooklyn Museum (fig. 36) and in the Staatliches Museum für Völkerkunde, Munich, also correspond closely to the miniature examples.<sup>89</sup> The Brooklyn Museum belt is 15.5 cm wide and 1.62 m long with selvedge ends, but its ties are missing. The weft elements are very much thicker than the warp. It is woven in warp-faced double cloth and has Inca key, diamond, and horizontal zigzag designs in black and white along each side edge, and diamond designs in the center in stripes of black and white alternating with brown and tan. The ends are bound in cross-knit loop stitch in red, gold, and white, while the sides are overcast in brown. Interestingly enough, only one of the belts found with the sacrificed women at Pachacamac was of this type (Uhle 2424, UM 31515). The remaining Pachacamac belts seem to be in provincial styles (see below).



Fig. 32. Group of Inca pins excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac. Lengths: 19, 17.2, 15.3, 6 cm. University of Pennsylvania Museum, Philadelphia 31281, 31282 (2532), 31283 (2534), 31287 (neg. # S4-142176).

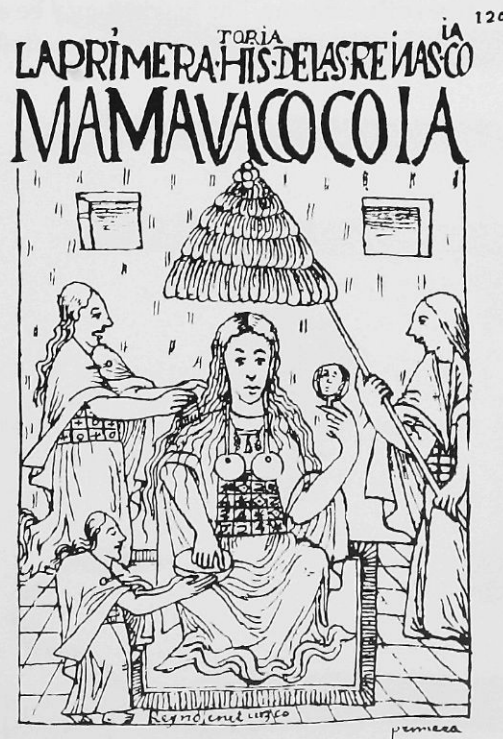


Fig. 33. Wife of the Inca emperor with servants, showing her dress pins (Guaman Poma, p. 120).



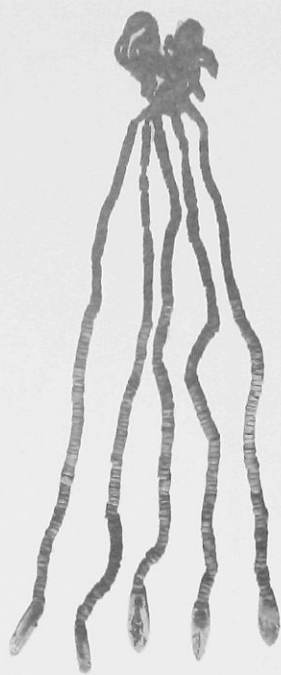


Fig. 34. Inca shell pendant excavated by Max Uhle in the cemetery of the sacrificed women at Pachacamac. Length: 20.5 cm. University of Pennsylvania Museum, Philadelphia 31254 (Uhle number 2613) (neg. # S4-142174).

## Headbands

The term for the headband recorded in early Spanish sources is *wincha*, usually written by the Spanish sources as *vincha* or *bincha*.<sup>90</sup> The miniatures do not have them, so our best evidence for what they were like is from Uhle's Pachacamac excavations. Uhle identifies a group of eleven smaller bands, 43 to 48 cm long, with ties, as headbands (fig. 37). These bands are all very similar to each other and appear to be Inca style. They are woven in complementary-warp weave in two colors, with designs of small diamonds and horizontal zigzags divided by horizontal bands, designs very similar to those on The Brooklyn Museum belt. One relatively elaborate example has Inca key designs as well (fig. 37, bottom). The ties are either a plied cord or braid. These bands are larger than those depicted in the drawings of Guaman Poma, a discrepancy that cannot be explained at present.

Guaman Poma depicts Inca women wearing their hair parted in the middle on top and falling loose down their backs. The figurines, however, show a division into two parts down the back with each half twisted slightly toward the center and joined with some type of ornament near the ends.<sup>91</sup> However, this hairstyle has not yet been reported archaeologically, nor is it mentioned in the historical sources. Cobo says that some women wore their hair loose, and some braided, and Uhle says the same about the sacrificed women at Pachacamac. The braiding may be a provincial style, though it is also more practical

for working. Guaman Poma shows young girls wearing very short hair (fig. 9).

## Headcloths

Cobo says that women also wore a headcloth, worn folded three or four times (fig. 38). The most common term for this garment is *ñañaca* (orthographic spelling: *ñañaca*), though *pampacona* (orthographic spelling: *p'ampakuna*) also occurs.<sup>92</sup> The latter term is from a verb meaning to cover with something. Guaman Poma depicts the cloth as having the sides folded inward, so that it covers the top and back of the head only. There also seems to be some stitching at the forehead and lower edge.

The evidence suggests that this garment was worn only by noble ladies. Cobo describes it as "of rich cumbi" which as we have noted above, was worn only by the nobility. Another source indicates that the headcloth was worn by "some principal Indian women."<sup>93</sup> Guaman Poma depicts several of the wives of the emperors wearing such headcloths (e.g., pp. 122-38), but not ordinary women (e.g., pp. 215-23 [217-25]). Such restricted use probably explains why neither Uhle nor anyone else has so far been able to identify an actual Inca headcloth. Few Inca noblewomen were buried on the coast.

Guaman Poma illustrates infant girls wearing a type of cap, but unfortunately there seems to be no other evidence for such a garment (pp. 231 [233], 233 [235]).

## Men's Costume

The primary Inca men's garments were a knee-length sleeveless tunic and a plain mantle. They also wore a long rope-like headband and other ornaments.

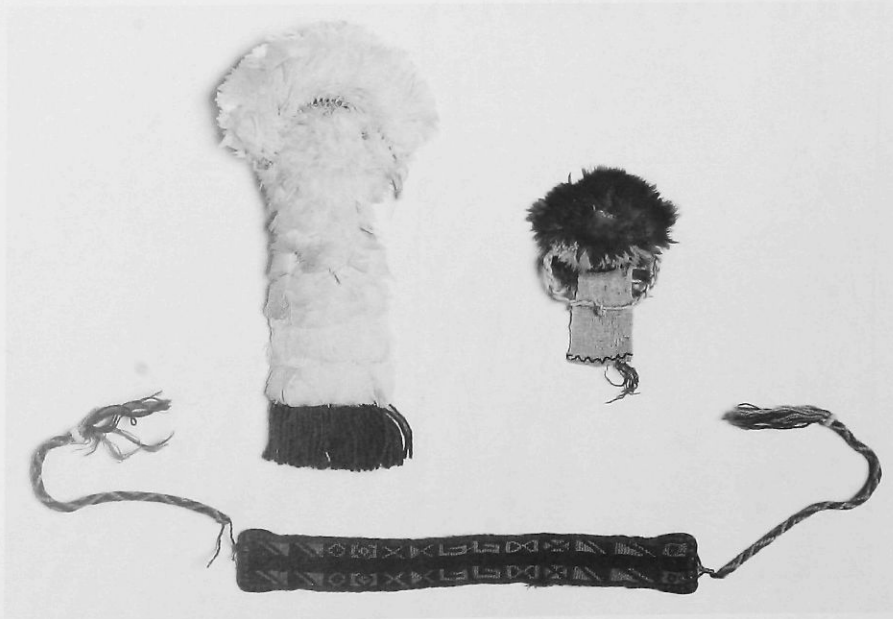


Fig. 35. Miniature Inca feather headdresses and belt. The belt is warp-faced double cloth in red and yellow with center stripe in black and purple. The left headdress has white feathers, the right one red. Height of white headdress 25 cm, red headdress 13 cm, belt 27.5 cm (excluding ties) x 3.5 cm. The Brooklyn Museum 41.1275.108a, b, Museum Expedition 1941, Frank L. Babbott Fund.



## Tunics

The Spanish word used in most early Colonial sources for the men's tunic is *camiseta*. The Cuzco Inca term is 'unku, usually written *uncu* or *uncu* by the Spanish.<sup>94</sup> As in the case of the women's wrapped dress, however, there is another term that may be used for provincial tunics, particularly in the north, *kusma*, usually written *cusma* in the Spanish sources.<sup>95</sup> *Kushma* is the usual modern term for a tunic or a tunic-derived garment throughout highland Ecuador and is also used for the tunics worn by some Peruvian tropical forest groups, including the Shipibo, Conibo, Machigenga, and Ashaninka (Campa),<sup>96</sup> who may have begun to wear it as a result of Inca influence.

Archaeologically, examples of full-sized Inca style tunics corresponding to the chroniclers' descriptions are not uncommon, probably due to the fact that they were a common diplomatic gift (fig. 39).<sup>97</sup> Some of these tunics are known to have been found in Inca contexts. They are woven in fine interlocked tapestry weave with the warp horizontal in the finished tunic, and the neck slit woven in using discontinuous dovetailed warp yarns.<sup>98</sup> The relatively standardized geometric designs are similar to those represented by Guaman Poma. Since this subject has been dealt with extensively in earlier articles (referenced in the two preceding notes), it is not necessary to discuss it further here. Both relatively coarse



Fig. 36. Full-sized Inca belt, in two shades of brown plus black and white. Warp-faced double cloth, camelid fiber. Ties missing. 1.62 x .155 m. The Brooklyn Museum 70.177.55, gift of Ernest Erickson.

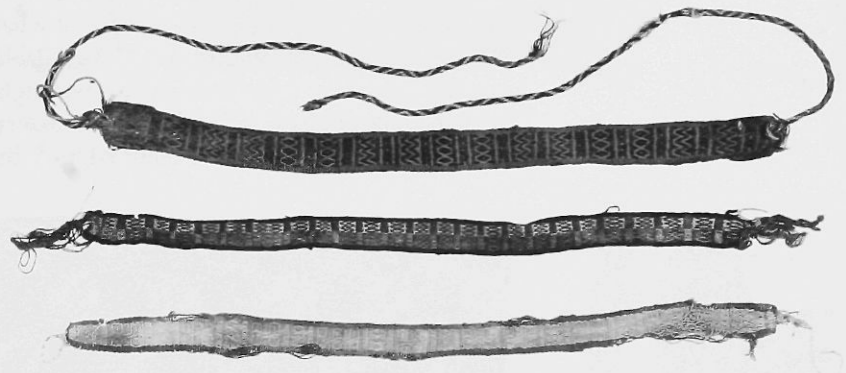


Fig. 37. Group of Inca style headbands excavated by Max Uhle in the graves of the sacrificed women at Pachacamac. 44 x 2.7, 43 x 2.3, 46 x 2.4 cm. (excluding ties). University of Pennsylvania Museum, Philadelphia 31550 (2230), 31549 (2450), 31552 (2248) (neg. # S4-142171).



Fig. 38. Wife of the Inca emperor wearing a headcloth and holding a bag (Guaman Poma, p. 136).

examples predominantly of undyed cotton and very fine examples of brilliantly dyed camelid fiber are known. The fine examples have striped seams and edge bindings, and zigzag embroidery along the hem.

## Mantles

The Inca man's mantle was called *yaqolla*, usually written *yacolla* in Spanish sources.<sup>99</sup> Cobo describes it as made of two pieces sewn together and worn loose or tied by two corners on the left shoulder when some activity was likely to dislodge it. Guaman Poma shows it worn loose or tied by two corners under the chin, under one arm, or around the waist.<sup>100</sup> In circumstances of grief or penitence he shows it worn loose over the head. The men's mantles in Guaman Poma are undecorated, even in the case of emperors who are shown wearing very elaborate tunics, although the text mentions various possible solid colors. Archaeological examples are scarce, possibly because mantles apparently were not subject to the same government controls as tunics (see below) or were less often used as diplomatic gifts, and probably because undecorated textiles are of little interest to looters or collectors.

Several male figurines with complete costumes provide more concrete evidence of what this garment was like (figs. 40, 41). The available examples consist of a relatively narrow rectangle in plain white or black, with colored embroidery in red and purple around the outer edges.<sup>101</sup> By

comparison with the miniatures, it is possible to identify full-sized examples of such mantles in museum collections, based on the weave, proportions, and embroidered edge binding.

One such example is shown in figure 42.<sup>102</sup> It was said to have been found with the mummy of a child at Ancón and given to the National Museum of Natural History in 1884. Also with this mummy were a number of plain-weave cotton textiles of the sort that are characteristic of the central Peruvian coast.

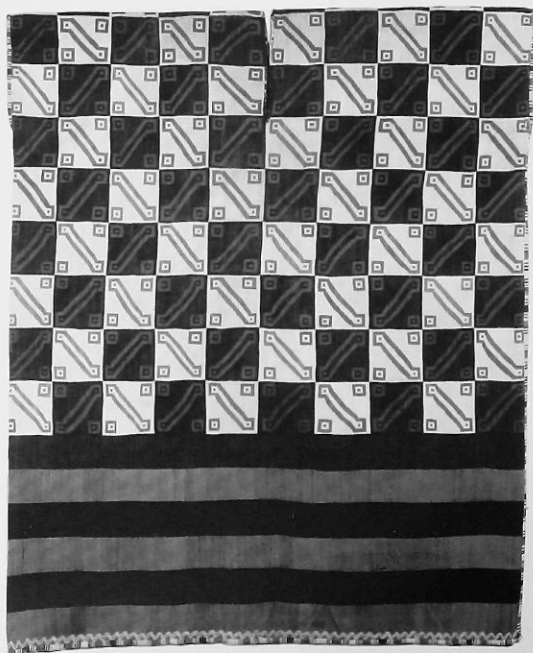
The Inca mantle, though fragmentary, is complete enough to permit a reconstruction of the whole. It is woven of creamy undyed camelid fiber. Its long dimension is 1.58 m and it is composed of two panels, each 79 cm long. It is clear from the chained warp loop end selvages that this long dimension is the warp direction and that the cloth is weft-faced plain weave, with 9 warp and 34–45 weft yarns per cm. The width of the mantle is incomplete, but since the embroidery follows exactly the same pattern as is found in the miniatures, it is clear that on one end slightly more than half of it remains. The midpoint, helpfully delineated by a change of color in the edging, is 48 cm from the corner, so that the full width of the piece must have been 96 cm.<sup>103</sup>

The edge binding is worked in two colors, one red and the other probably originally purple but now brownish. Most of the edge is overcast, but cross-knit loop stitch occurs for 18 cm around the corners and for 28 cm in the middle of the long side. In the cross-knit loop stitch portions the two colors alternate in narrow stripes. In the overcast portions, the colors are solid and alternate around the perimeter in such a way that an edge of one color is always opposite an edge of the other color.<sup>104</sup> This pattern matches that found on the miniatures.

One particularly fascinating aspect of this piece is that the two surviving corners are still creased from being tied, and the center of the long side is also wrinkled and stained. It certainly appears that it was worn with the two corners tied together, as Guaman Poma shows.

Because the weaving is relatively coarse, the fabric is undyed, and the only decoration is the edge binding, it is possible that despite being weft-faced, these garments were not considered *qompi*. They therefore might not have been suitable as diplomatic gifts in contexts where only *qompi* was appropriate.

Fig. 39. Inca man's interlocked tapestry tunic. Camelid fiber warp and weft. 95 x 78.5 cm. The Textile Museum 91.147.





## Breechcloths

Inca men also wore a breechcloth, called *wara*, written *guara* or *huara* in the Spanish sources, which Cobo describes as a little wider than the hand.<sup>105</sup> The figurines are not provided with them.

The only published example of an Inca loincloth was found by Uhle in another part of his excavations at Pachacamac (fig. 43).<sup>106</sup> Under the front terrace of the temple, Uhle found a small number of Inca graves, of both men and women, in a separate stratum about 2 meters higher than the other graves in this area.<sup>107</sup> This loincloth is of camelid fiber and has a narrow portion (9 cm at center), presumably worn in back, and a wider portion (15 cm at widest end), presumably worn in front. The two parts are woven in one piece (42 cm long) in warp-faced plain weave, with discontinuous warp yarns added between the continuous ones to create the wider portion. This example is dark brown with red and yellow stripes. It has brown overcasting on the side edges and cross-knit loop stitch around the ends. There is a thick strap on each corner, made with 4-strand warp twining (33–34 x 2.5 cm). Similar loincloths, both plain and striped, with more exaggerated shaping, have been found in dry cave burials in the Cuzco area.

In Uhle's example, the ties are connected by cords, but the garment cannot have been worn this way. It appears as if the front and back ties should be fastened together at the sides. Garcilaso says that the garment was triangular and that the ties on the wide end were passed around the waist and tied in back, the narrow end was passed between the thighs and fastened to the same band behind.<sup>108</sup> Unfortunately, this statement does not precisely correlate with the archaeological evidence. Putting on the loincloth for the first time was an important part of a boy's initiation ceremony. The ceremonies for boys of royal lineage were very elaborate and held over several weeks in November and December.<sup>109</sup>

## Headgear

Headgear was explicitly used within the Inca empire to indicate ethnic or geographic origin, and it therefore does not seem to have been included in the taxation and redistribution system. The historical sources provide some information on who exactly was entitled to wear Inca style headgear. It includes first of all men of any of the royal lineages (Incas by descent). Second, the privilege was extended to men from Inca-speaking groups in the area near Cuzco after they had been conquered (Incas by privilege).<sup>110</sup>

The most prominent textile item was a headband called a *llawt'u*, usually spelled *llaute* in Spanish sources.<sup>111</sup> Cobo describes it as a braided wool band, the thickness of half a finger and the width of a finger, wound many times around the head, to the width of a hand.<sup>112</sup> Again, few actual

Fig. 40. Inca gold male figurine with clothes. The tunic has the same design as the full-sized example in figure 39. Neg. no. 329852, photo by Boltin, Courtesy Department Library Services, American Museum of Natural History, New York, 41.2/902-905.

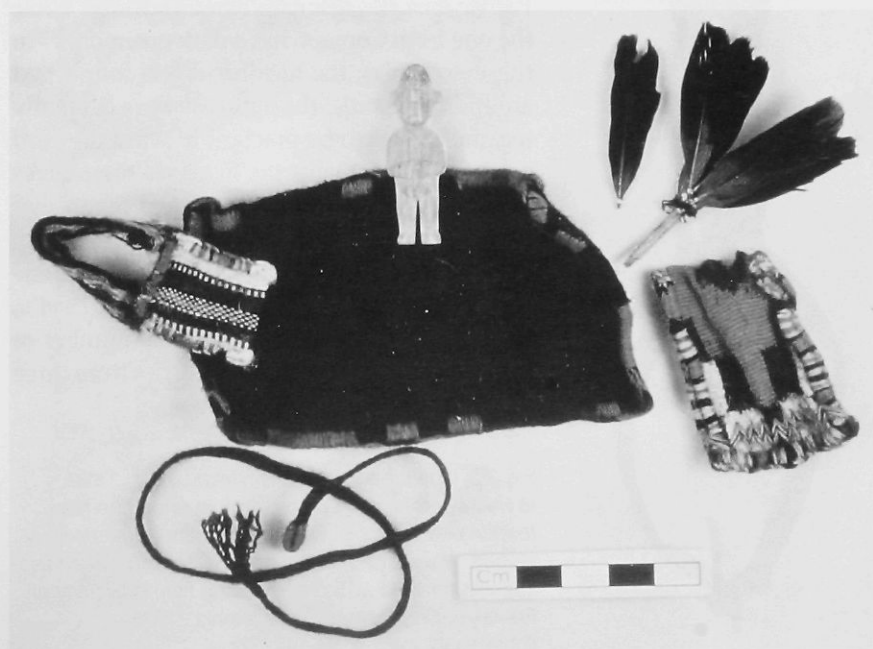


Fig. 41. Inca spondylus shell male figurine with clothes, found on Mount Copiapó by Johan Reinhard. Mantle 11 x 6 cm. Photo by Johan Reinhard. Museo Regional Atacama, Copiapó, Chile.

Fig. 42. Fragmentary Inca man's mantle. Weft-faced plain weave, camelid fiber. 1.58 x .84 m. Department of Anthropology, National Museum of Natural History, Smithsonian Institution, catalog no. 074134d.



examples of these headbands are known archaeologically (as would be expected from their restricted use), and the miniatures provide clues for identifying them.

The existing miniatures are braided cords, with a (red) loop at one end and a tassel at the other, in the manner of a sling. A figurine in the Museum Rietberg, Zurich, has a light tan *llawt'u* still wound on the head, beginning with the loop end which is placed on the right front top, extending down and winding around four and a half times, with the tassel end tucked under at the top in back to secure it.<sup>113</sup> A figurine found at Pachacamac has a similar blue headband, while the one from Copiapó has a dark green one.<sup>114</sup> In these examples, the headband was found tied around the mantle; the figurines were evidently too small for it to be practical to wind the cord on the head. Actually, the figurines themselves are made with ridging on the head that is evidently meant to represent or to accommodate the *llawt'u*. A figurine in the Musée de l'Homme in Paris has shell inlay on the ridges of the *llawt'u*, suggesting a patterned braid.<sup>115</sup> The number of turns suggested by such ridges varies from three on the latter figurine, up to ten or so.

Fig. 43. Inca breechcloth excavated by Max Uhle at Pachacamac in an upper stratum under the front terrace of the temple. Dark brown with red and yellow stripes. Warp-faced plain weave, with warp-twined ties, camelid fiber. 42 x 15 cm excluding ties. University of Pennsylvania Museum, Philadelphia 27573 (Uhle 1032) (neg. # S4-142177).

The only full-sized examples so far reported were found and identified by Max Uhle in his excavations at Pachacamac in the same area as the breechcloth mentioned above. The finds included "several" heads with spirally wound black cords.<sup>116</sup> These cords were wound twelve or thirteen times around the head. Uhle gives the measurements as between 21 1/2 and 23 1/2 feet (6.55 and 7.16 m) long. Unfortunately I was not able to examine them, but Uhle says that they are "braided of 32 strands, flat, with four edges." Another braid identified by Uhle as a *llawt'u* is an unassociated piece from another part of the site (fig. 44). It also is black and similar to the others in length. It does have a loop at one end and a tassel at the other, and is square braided, Uhle says of 16 strands, but it has only four wales, which would make it 8 strands. It may be noted that Guaman Poma's drawings, which show a relatively narrow ridge, do not correspond to either the available archaeological evidence or to the verbal description of the *llawt'u* as being wound "many times" and "a hand width."

As Uhle was aware, Garcilaso says that black *llawt'us* were worn by most Inca men, while the emperor wore a multicolored one.<sup>117</sup> Guaman Poma's description of the *llawt'us* worn by several emperors, presumably based on an earlier pictorial source, says that they were red (pp. 89, 97, 103, 109), while that of the mythical first emperor is described as green (p. 87). Other reports from areas near Cuzco that were not originally Inca speaking suggest that a *llawt'u* of



some other color was worn there. For example, in Cotahuasi (50 leagues from Cuzco and 30 leagues from Arequipa) the *llawt'u* was said to be black and white.<sup>118</sup>

Military men wore a leather helmet called *'umachuku*, written *umachuco* in Spanish sources, instead of a *llawt'u* (fig. 45).<sup>119</sup> No examples closely corresponding to Guaman Poma's representations have been reported to date.

Inca nobles wore a metal plaque called *canipu* (Spanish spelling) over the forehead, tied over the *llawt'u* or affixed to the front of the military helmet (fig. 46).<sup>120</sup> Guaman Poma depicts this plaque as either rectangular (flaring slightly toward the bottom) or round, depending on whether the nobleman belonged to the upper (Hanan, north) or lower (Hurin, south) moiety of Cuzco.<sup>121</sup> A few archaeological examples of the rectangular style have been reported.<sup>122</sup> Guaman Poma shows Inca men also wearing some sort of feather ornament in the *llawt'u*, above the metal plaque.<sup>123</sup> Feather penaches, consisting of several long feathers tied together at the base, are also associated with some of the male figurines (e.g., fig. 41). Sometimes men wore a flower in their *llawt'u*, especially for fiestas.

In place of the *canipu*, the emperor wore a red fringe suspended from small gold tubes, called the *mazcapaicha* (Spanish spelling) (fig. 46).<sup>124</sup> This fringe was the symbol of his office, like a European crown. Guaman Poma also shows the emperor wearing a stick projecting above the *llawt'u* from which a bell-shaped ornament was hung, surmounted by three feathers, but no Inca term for this ornament seems to have been recorded. Guaman Poma depicts the *llawt'u* and imperial ornaments as removable as a unit, for example when the emperor is at worship (p. 248 [250]), but in a drawing of the *mazcapaicha* detached, it is depicted as having a tie on each side (p. 145).

Uhle also notes that the hair on some of the Inca skulls from Pachacamac "was clipped on the top of the head as closely as three-sixteenths to three-eighths of an inch" (5–10 mm), and Guaman Poma's drawings and other sources confirm that Inca men wore their hair very short (fig. 46).<sup>125</sup> Garcilaso indicates that Inca men cut their hair off as close to the head as possible with the available tools (obsidian blades).

Guaman Poma shows a five-year-old boy wearing an interesting headcovering that is surmounted by an animal head (p. 208 [210]), but unfortunately no other evidence is available on this subject.

## Other Ornaments

Inca men also wore large earplugs, called *paku*, written *pacu* or *paco* in Spanish sources.<sup>126</sup> These ornaments were apparently of cylindrical shape, fitted into a large hole in the earlobe (figs. 45, 46).<sup>127</sup> Ear piercing was another important part of the Inca boys' initiation ceremony. The earplugs were such an important distinguishing mark that Inca men were nicknamed *pakuyoq* (earplug man), which the Spanish translated as *orejón* (big ear). The most important nobles wore earplugs of silver or gold. However, Garcilaso notes that some groups of Incas by privilege wore earplugs of wood, tufts of white wool, totora, or furcraea.<sup>128</sup> Guaman Poma mentions a

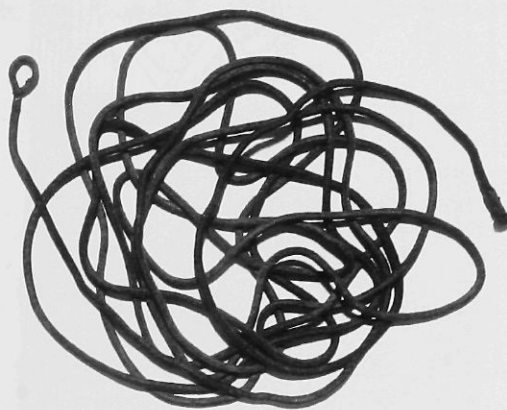


Fig. 44. Inca *llawt'u* excavated by Max Uhle at Pachacamac. Braided camelid fiber (black). 6.985 m x 1 cm. University of Pennsylvania Museum, Philadelphia 27635 (Uhle number 1347) (neg. # 142167).



Fig. 45. Inca nobleman wearing military headgear and disk pendant (Guaman Poma, p. 151).

group that wore ear plugs of bone. The earplugs Uhle found in his Inca burials at Pachacamac are made of coils of strips of leaves.<sup>129</sup> The size of one pair is given as 1 1/4 in wide by 2 3/4 in thick (7 cm diameter, 3 cm deep).

Fig. 46. Inca emperor and noblemen wearing civilian headgear (Guaman Poma, p. 318 [320]).



Fig. 47. Inca bag with warp-resist patterning (red). Strap in double-woven complementary-warp weave (white, black, and two shades of brown). All camelid fiber. Bag 16 x 16.5 cm, strap 74 x 2 cm. The Textile Museum 91.752, gift of Mary Elizabeth King.



Nobles, both Inca and provincial, might also wear a plain wide gold or silver bracelet, called *chipana*, usually on the right forearm (fig. 46).<sup>130</sup> These bracelets were among the items given by the emperor as diplomatic gifts. The sacrificed boy found on Mt. El Plomo wears one. Military leaders of sufficient status wore a large metal (gold, silver, or copper) disk hanging from a cord around the neck, called *purapura* (fig. 45).<sup>131</sup> These also were given by the emperor as diplomatic gifts.

Guaman Poma also shows the emperors and military captains (who were usually sons of emperors) wearing fringed ligatures just below the knees and at the ankles, but he provides only a Spanish name (*atadero* or "ligature") (figs. 45, 46). Other sources do not seem to mention these ornaments.

## Bags and Sandals

Bags are depicted as being carried by both men and women in Guaman Poma's drawings, and the bags he shows are undifferentiated by the gender of the person carrying them. However, early dictionaries give the term *'istalla*, usually spelled *ystalla* in Spanish sources, for the woman's bag, and *ch'uspa*, usually spelled *chuspa* in Spanish sources, for the man's bag.<sup>132</sup> The principal purpose of both was to carry coca leaves, which when chewed with lime are a mild stimulant. Among the figurines, bags are associated with men. Inca bags are as frequently preserved on the coast as men's tunics and must have been a common diplomatic gift. One of Uhle's Inca graves (male) at Pachacamac included an Inca style bag (Uhle 1005h, UM 27557). An Inca style bag was also found in a mummy bundle from the Inca site of Puruchuco near Lima on the central coast.<sup>133</sup> Inca bags are readily identifiable by their edge bindings, by the complementary-warp or -weft zigzag and dot designs, and by their straps. The many bags found with the sacrificed women at Pachacamac, however, are all provincial rather than Inca in style (see below).

Some Inca bags have only plain-weave stripes. One distinctive type of striping involves two dark yarns alternating with one light one, creating a speckled effect (fig. 4). In some cases, a light-colored zigzag is embroidered in these stripes by carrying a light yarn under a sequence of the matching woven yarns. Besides the common two-color complementary-warp or -weft



patterns, sometimes the patterned stripes are in three colors (fig. 6).<sup>134</sup> Another unusual technique is the use of randomly resist-dyed yarns.<sup>135</sup> The example in figure 47 is probably warp-faced.

Tapestry-woven bags also occur but are rare (fig. 48).<sup>136</sup> The example shown has an edge binding that is identical in technique and design to the *tupu* cords found on the female miniatures (fig. 13). Possibly the tapestry weave and wrapped edge binding are a higher status style than is represented by the more common non-tapestry bags.

The bags usually have a carrying strap, most commonly a double-woven complementary-warp weave (figs. 5, 47) but sometimes a warp-faced double cloth.<sup>137</sup> The designs are similar to those found in women's belts and headbands.

Besides these fancy bags, Inca religious offerings and burials sometimes include coca tightly packaged in a plain bag that is sewn closed and either wrapped with long and narrow leaves secured with a knotted net or covered with feathers.<sup>138</sup> The Pachacamac Inca men's burials include one such bundle, with a leaf covering, and others were found in the graves of the sacrificed women.<sup>139</sup> An example in The Textile Museum collection is covered mainly with yellow feathers from the Scarlet Macaw but with some iridescent Green Honeycreeper feathers at the top (fig. 49).<sup>140</sup> Another example is associated with a pair of Inca style sandals and a fine sling (fig. 50). Both Textile Museum bags are woven of cotton. The Textile Museum bundles are so well preserved that the top closure is not visible, but those on the bundles found on Mt. El Plomo and Mt. Mercedario were done in simple looping. These bundles probably represent the way coca was packaged by the Incas for distribution or specifically for offerings. For use, coca was kept in the striped bags described above.

Cobo describes the use of sandals, called *'usut'a* (written *usuta*, *ojota*, or *oxota* in Spanish sources), of untanned leather from the neck of camelids, with wool ties, the same for men and women.<sup>141</sup> Although he describes the ties as colorful and with pile like a rug, no sandals so rich have been found. Another colonial author indicates that these fancy ties were worn only by nobles.<sup>142</sup> Those found on the coast that resemble the ones depicted by Guaman Poma have strictly utilitarian ties (figs. 50, 51). Other authors mention sandals with soles of *furcraea* fiber; sandals with braided plant fiber soles and ties like the sandals with leather soles have also been preserved.<sup>143</sup>

The Textile Museum Inca style sandals have leather soles. In two cases, an extra piece of leather has been added on the bottom under the front of the foot for reinforcement. Four slits are cut in the edges of the leather, one on each side of the toes and one on each side of the ankle. Leather toggles are put through these slits to hold the ties. The ties consist of thick replied cords of undyed camelid fiber. The precise spin and ply configuration varies among the four sandals. In the sandals in figure 51, the lacing is supplemented with some possibly *furcraea* fiber yarns, perhaps as a repair. The lacing begins at one side of the toe, proceeds around the heel and up to the other toe, after which it laces in a figure-eight around itself three or four times over the top of the foot. To begin or end, the yarn may be knotted on itself beside the toggle, or it may be



Fig. 48. Inca bag in interlocked tapestry weave, camelid fiber warp (3-ply) and weft. Three stripes have red key motifs with tan outlines on a purple ground, while the two middle stripes have brown keys with tan outlines on a red round. Side edges covered in a wrapping warp structure. 23 x 24 cm. The Textile Museum 1966.59.50, gift of Alan R. Sawyer.



Fig. 49. Inca coca bundle with sling of uncertain origin said to have been found at Ocucaje in the Ica Valley. The bag is cotton, and the feathers are mostly Scarlet Macaw and Green Honeycreeper. The sling is leather with camelid and plant (possibly *furcraea*) fiber. 17 x 13 cm and 7 cm thick. The Textile Museum 1968.1.16, anonymous gift.

Fig. 50. Inca coca bundle with sling of uncertain origin and a pair of Inca sandals, said to have been found together in the Nasca drainage. The bag and net are cotton. 20 x 12 cm and 8 cm thick. The sling is plant (possibly *furcraea*) and camelid fiber. The sandals are leather with camelid fiber ties. 20 x 10 cm and 21.3 x 10.5 cm. The Textile Museum 1966.7.11, anonymous gift.

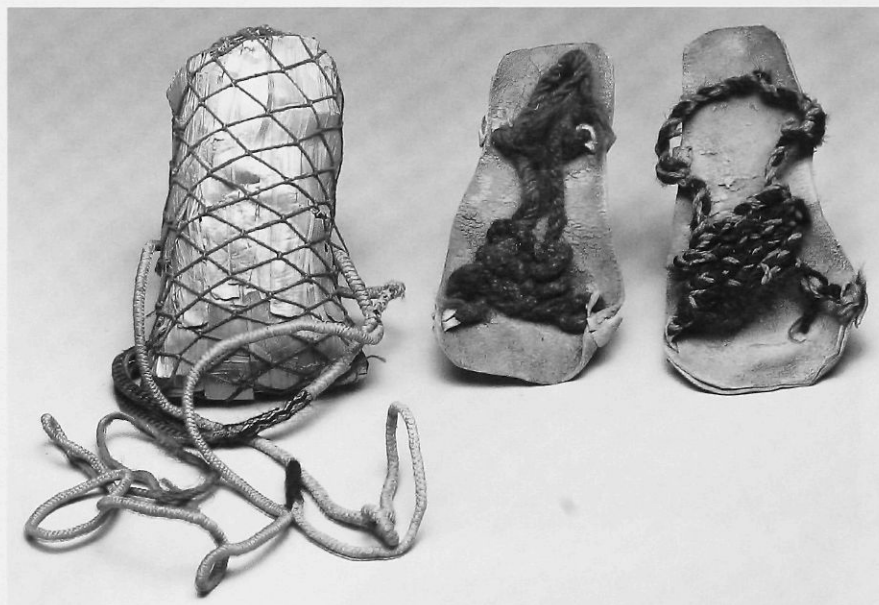
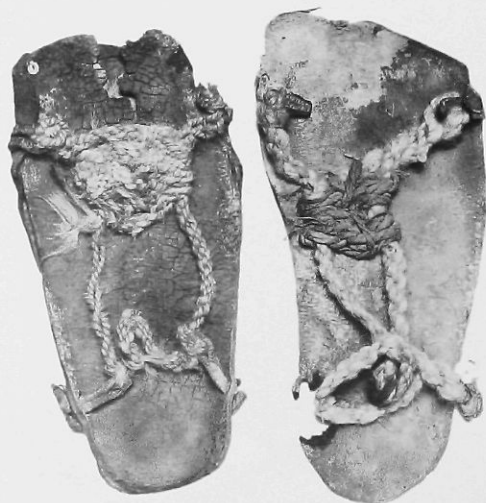


Fig. 51. Inca sandals, with leather soles and camelid fiber ties, with repairs in plant (possibly *furcraea*) fiber. 24 x 12 cm. and 25 x 11.5 cm. The Textile Museum 1961.37. 12a, b, gift of Alan R. Sawyer.



put through and the end spliced into a loop. For the heel toggles, the lacing is put through the slit and then either twisted or knotted on itself. For the second toe toggle, the yarn is put through and then twisted around itself before proceeding with the lacing.

### Provincial Costume in Inca Contexts

Some Inca sacrifices and coastal Inca burials also contain textiles that differ from those worn by people from the Cuzco area, as discussed above. A look at this evidence, together with the historical sources, will clarify both Inca policy and the archaeological record.

Pedro Pizarro, who as a teenager accompanied his older cousin Francisco Pizarro in the conquest and later wrote a vivid account of it, says that people could be identified by their costumes, since each province had a different costume.<sup>144</sup> Cieza de León, traveling in Ecuador and Peru in the 1540s, says that people were identified mainly by their headdresses,<sup>145</sup> and indeed Pedro Pizarro's costume descriptions also focus mainly on the headdress. José de Acosta, a Jesuit, whose work was published in 1590, also says that each province had a different costume, and he too notes especially the headdresses.<sup>146</sup> Acosta also says that people moving from one place to another were supposed to wear the clothes of their original province. The Incas moved people for various purposes, for example, as colonists to help pacify newly conquered lands.

### The Peruvian Coast

The coastal costume tradition was quite different from that of the highlands, so imported highland cloth is easily recognizable in these contexts. Although almost nothing is known about south coast costume, the styles of the central coast (Chancay) and north coast (Chimu) are well preserved archaeologically.<sup>147</sup> Use of cotton fiber predominates. Men's tunics are generally short, waist length, and made with the warp vertical; some have short sleeves. The loincloth was therefore visible and often decorated. Preserved examples are rectangular with a pair of ties extending out from each side of one end. Men's mantles are extremely large and made of three long and narrow loom panels sewed together, with decoration consisting of end borders, and sometimes of field patterning as well. Chimu men also wore cloth hats or turbans. Chimu and Chancay style women's dresses are sewn up the side and on the shoulders and were not usually belted. At least some are pleated on the shoulders.<sup>148</sup> Women probably also wore mantles, but little definite information is available on this point.

Although Inca style tunics have been found on the central and south coast of Peru, it is clear that they were not worn by everyone. The documentary sources say that only those who were given such tunics by the emperor might wear them,<sup>149</sup> and the contexts in which they have been found confirm that only those with special association with the government had them.



The contents of the Inca men's graves excavated by Uhle at Pachacamac are particularly interesting because it is clear from the short hair, *llawt'u*, and earplugs that these men were Incas from the Cuzco area. Uhle describes two graves, as well as some miscellaneous related objects from the same area without precise grave associations. Although the condition of the textiles in these graves is unfortunately not very good, it will be worth enumerating them briefly for what they reveal about Inca practices.

The grave he calls "A" included, besides a skull with a *llawt'u*, an Inca style plate, earplugs, and the bag already mentioned, an Inca style diamond band tunic (1003a, 27541), an Inca-influenced tunic brocaded in a coastal pattern (1003b, 27542), a coastal style of brocaded mantle (1004, 27535), three large plain fabrics in Chimú style paired warp plain weave (1005a,c,f, 27536, 27534, 27538), a plain fabric of coastal style (1005b, 27537), two plain cotton mantles of uncertain origin with a red embroidered edge binding (done in a non-Inca stitch) (1005d,e, 27539, 27540).<sup>150</sup> He says that the plain fabrics were shrouds.

For grave "B" Uhle notes there is some confusion in the contents except for seven tunics found folded between the arms of one mummy. The tunics are all of Inca size and proportions. They include one of plain black camelid fiber (1033, 27570), another black one with a *t'oqapu* band (1034, 27569), one of plain cotton with Inca style binding on the armholes and lower edge (1038, 27571), one of cotton with orange above waist level and blue and white vertical stripes below (1035, 27572), one of undyed cotton with gauze weave bands (1036, 27567), one plain with a yellow fringe band on the lower edge (1037, 27566), and an undyed tan tunic with a red fringe band on the lower edge (1039, 27568).<sup>151</sup> Gauze weave is a local technique.

Thus, both Inca and Inca-influenced tunics woven in local techniques were found in the same tomb. All the tunics, however, are of Inca size and proportions, which appear to be the key factors in what was appropriate for Inca men to have. On the other hand, it is interesting that none of the mantles corresponds to the Inca style identified above; there seems to have been more flexibility here.<sup>152</sup> The presence of Chimú style fabrics and the mantles with embroidered edge bindings is interesting since these are not local products. They may have been redistributed tribute textiles, which in turn suggests that not all tribute textiles were Inca in style.

The two graves in which Uhle found Inca style female garments in Ica are segregated from the graves of other local people and contain many objects with Inca features.<sup>153</sup> Dorothy Menzel, who has studied the ceramics in detail, interprets these graves as belonging to local people directly connected with the Inca administration. Interestingly, *quipus* (Inca record-keeping devices of knotted cords) were also found in both graves (5446, 5419). Grave Tm, which contained the patterned dress fragment (fig. 18), had no ceramics, but only pyroengraved gourds in the Late Horizon styles. It also included a fragment of plaid cotton fabric, probably locally made (5447f), two feather penaches (5444, 5445), some white feathers strung together (5443), and some highland style braided rope (5448). Grave Tk, which contained the fine Inca style blue and white cotton wrapped dress, had a skull identified as female. The ceramics included two in Cuzco Inca style, two in the Chimú style, eighteen in a local provincial Inca style, and three in other local styles. The grave also contained two other Inca style cotton fabrics (5422b,c), too deteriorated to identify with certainty but also folded into small bundles like the dress. Other textile items were two slings (5420, 5421), an Ica style oblique-interlaced basketry headdress (5411), some coastal plain-weave fabrics (5422g,h), and a small cotton fragment with discontinuous warp patterning (5422l).

These burials have a different pattern of association than those at Pachacamac. The bodies are apparently female and have Inca style garments with them but not clothing the body. The presence of the local style of headdress suggests that the women were probably of local origin and wore the local style of clothing, but that they were nevertheless granted some Inca cloth from the storehouses by reason of their affiliation with the Inca administration. While the women could certainly have been wives of administrators, the presence of *quipus* in these graves raises the question of whether the women might have had some authority on their own account.

## Highlands of Peru and Bolivia

In the highlands of Peru and Bolivia, local costume was in some ways confusingly similar to Inca costume proper, instead of being obviously distinctive. For example, although archaeological evidence is scanty, it appears that a knee-length tunic and mantle was the general men's dress throughout this area. However, there

were differences in the size and decoration of these garments among the different provinces, which persisted under Inca rule.

The use of knee-length tunics by highland men dates back at least as far as the Huari and Tiahuanaco styles (c. A.D. 600–900), which are better known than other highland styles because of more extensive ties to the coast in this period. The site of ancient Huari is near modern Ayacucho, in the central highlands, and Huari influence in other media was significant as far north as Piura. The site of Tiahuanaco is in what is now northern Bolivia; the southern extent of Tiahuanaco influence is unclear, but it reaches at least as far as Cochabamba in Bolivia and San Pedro de Atacama in Chile.

The history of the pinned and belted women's wrapped dress is less clear. The earliest known representation of such a costume is found in Recuay ceramics.<sup>154</sup> The Recuay style appeared around 200 B.C. in the Callejón de Huaylas, flanking the upper reaches of the Santa River, which is about the same latitude as Chavín. Representations of wrapped and pinned dresses on women also occur occasionally in ceramics of the middle phases of the Moche and Nasca styles dating to the early centuries after Christ (from the north and south coast of Peru respectively), although representations of dresses with sewn shoulders are more frequent in these styles.<sup>155</sup> At least two representations of women with shoulder pins occur in Huari empire contexts, and there are a few schematic representations of Huari women wearing a long belted garment.<sup>156</sup> Shawl pins, not unlike Inca examples, have also been found in Huari graves. The absence of metal shoulder pins proves little, however, since pins of perishable material such as thorn or wood could easily have been used instead.

The pinned and belted wrapped dress seems not to have been worn in the south, however, though the precise line of demarcation is unclear. In burials contemporary with Tiahuanaco from San Pedro de Atacama in northern Chile and later but pre-Inca ones at Estuquiña in the Moquegua Valley in southern Peru, women wear tunics whose basic construction (with vertical warp and neck slit) does not differ significantly from men's.<sup>157</sup> Women's tunics at Estuquiña, which were knee-length, may have been worn belted. Both sites are of intermediate altitude. Likewise, at Arica on the northern coast of Chile, both male and female burials of the later prehispanic periods include tunics.<sup>158</sup> Well-preserved garments, with some Tiahuanaco

influence, found in cave burials at Puqui, in the Department of Oruro in Bolivia, are all tunics.<sup>159</sup>

In terms of historical evidence, Guaman Poma supplies drawings of costume in three different highland areas, and there are brief verbal descriptions by some other early colonial authors. Although it is beyond the scope of this article to provide detail, these accounts confirm that hairstyles and headgear varied the most from one province to another, but footwear and tunic designs also varied. For example, moccasins were worn instead of sandals in the Lake Titicaca and Arequipa areas. The lengths of women's dresses and shawls also varied.

The boy found on Mt. El Plomo in Chile who is certainly an Inca sacrifice and was accompanied by Inca style female and llama figurines, wears moccasins, a tunic and mantle with non-Inca decoration, and a headband that is also not braided in the Inca style.<sup>160</sup> His hair is worked into multiple braids, a style worn in various parts of what is now Chile and Bolivia. His silver ornament is similar to those worn by men from the Lake Titicaca area under the chin as depicted by Guaman Poma, although the headdress differs.<sup>161</sup> The boy found on the summit of Mt. El Toro in Argentina was also not wearing Inca style garments, and the only Inca artifact reported is one of the six sandals found.<sup>162</sup> Perhaps the fact that boys were not taken from their families and cloistered like girls resulted in male sacrifices being more likely than female ones to be buried with local rather than Inca costume.

In looking at the non-Inca textiles in the graves of the sacrificed women at Pachacamac, the temptation is to think of them as suggesting where the women might have originated. But the women had been taken from their families at the age of ten and were probably wearing clothes supplied from Inca storehouses, so these items were more likely submitted as taxes from various provinces. These non-Inca textiles appear to originate predominantly from highland provinces.

One moccasin fragment was found (2564e UM 31279) that might have been from either the Lake Titicaca or Arequipa area. Neither of the two sandals illustrated by Uhle conforms to the Inca style described above.<sup>163</sup> What he describes as the most common type has a cord loop behind the heel, with extensions along the sides of the foot. The sandal is secured with a tie that extends from the middle of the front.

Both wide and narrow belts were found, which Uhle identifies as *mamachumpi* and *chumpi* respectively. He found these terms in the rela-



tively detailed descriptions of women's costume from Rucana province (Ayacucho area) in the governors' reports of the 1580s, which otherwise sound like Inca costume.<sup>164</sup> The reports specify that the *mamachumbi* (orthographic spelling: *mama chumpi*) is a thick wide underbelt and the *chumbi* (*chumpi*) is a longer, narrower overbelt with multicolored patterns. Although this text clearly states that the two kinds of belts were worn together, Uhle unfortunately does not specify which belts were found on the same body. Guaman Poma, who was from Rucana, depicts women's costume as indistinguishable from that of the Cuzco area, although the men's costume includes a distinctive tunic pattern, hair-style, and headband ornament (fig. 52).<sup>165</sup> His belt representations, however, are schematic and could be taken to show either style. Since use of a wide and narrow belt together is not mentioned by other writers describing Cuzco Inca costume, and most of the Pachacamac belts are in provincial styles, it seems likely that it is a provincial variation whose exact extent is uncertain. The Inca female sacrifices and figurines have only wide belts, though the possibility exists that such usage represents a ceremonial style.

The majority (more than twenty) of the wide belts from Pachacamac are similar to Inca belts in size and shape but differ in technique and design. They have double-woven complementary-warp patterns, mostly relatively simple chevrons. The double-woven construction of these belts makes them thicker, stiffer, and stronger, features that are valued in women's belts today for abdominal support. These belts can be subdivided into two groups. The majority, fourteen, have brown plain stripes between the chevron-patterned stripes, while seven others have chevrons in every stripe (fig. 53).<sup>166</sup>

The belts with allover chevrons (amounting to zigzags) are strikingly similar to an archaeological belt fragment found by Alfred Métraux in a *chullpa* (tower) burial in the Iscara district northwest of Lake Poopó in the modern Department of Oruro, Bolivia (Inca province of Caranga).<sup>167</sup> The similarities include the structure of double-woven complementary-warp weave, the horizontal zigzag design, and the rectangles along the side edges of the belts. The belt fragment is said in turn to be very similar to modern Chipaya belts.<sup>168</sup> The Chipaya are a conservative group who live in the modern province of Carangas near the *chullpas* where Métraux was working.

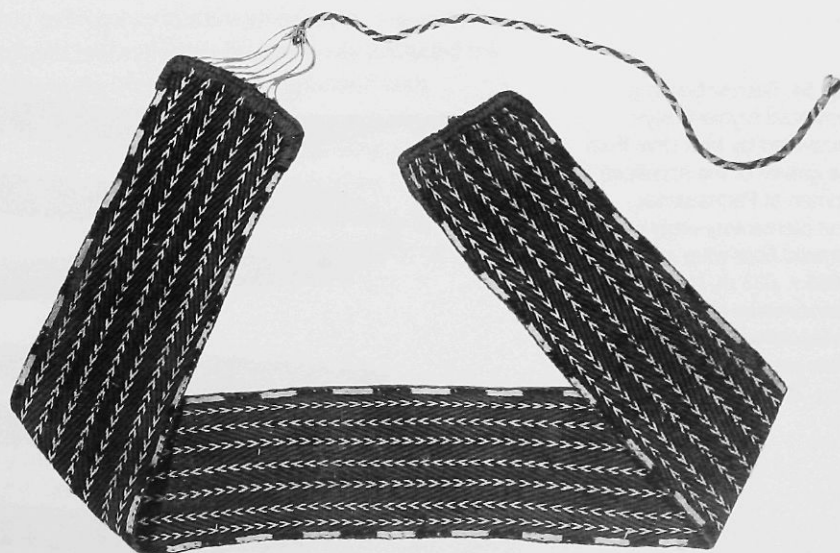
It is more difficult to count the narrow belts, since most are fragmentary, but the total is again slightly over twenty. However, there is not a clear majority of one style. The complete examples are between 4 m and nearly 7 m in length. Three complete belts, two fragments, and one unfinished belt are in a weave derived from 2/1 twill that makes small square figures.<sup>169</sup> One complete belt and some seven fragmentary ones have simple complementary-warp weave diamond designs.<sup>170</sup> One complete belt and five fragments

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Fig. 52. Fiesta costume in Rucana province. The men are wearing feathered neck ruffs and long knee fringes that they do not wear on a daily basis (Guaman Poma, p. 320 [322]).

Fig. 53. Wide belt, similar to Chipaya belts, excavated by Max Uhle from the graves of the sacrificed women at Pachacamac. Double-woven complementary-warp weave, camelid fiber warp and weft. 1.435 x .144 m. University of Pennsylvania Museum, Philadelphia 31492 (Uhle number 2415) (neg. # S4-142172).



have designs in complementary-warp weave having horizontal color changes done in a structure that differs from the Inca examples discussed above (fig. 54).<sup>171</sup> This structure was recorded around 1600 by a priest who was working along the northern shore of Lake Titicaca (Colla province), but it may also have been used in other areas.<sup>172</sup>

There are two wide belts that are significantly shorter than the Inca and chevron-patterned belts. They both have horizontal zigzag and diamond designs in red and black in double-woven complementary-warp weave.<sup>173</sup> Another south highland style is probably represented by a wide belt with a four-strand warp-twined structure, similar to that of Inca loincloth ties.<sup>174</sup> This belt is relatively plain with a black center stripe and red side stripes.

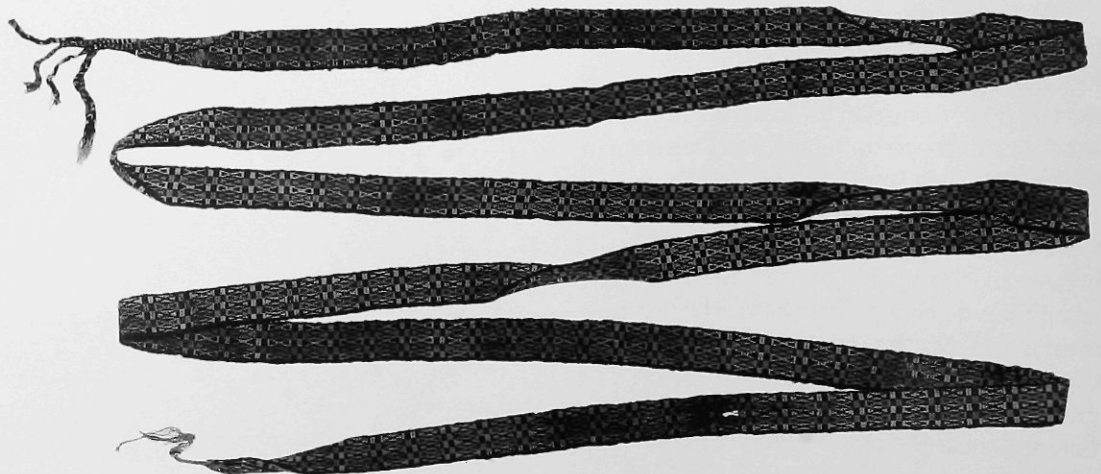
The finds at Pachacamac also include three belts that relate to coastal styles. One is in a south coast style both in design and construction.<sup>175</sup> The other two are in the highland double-woven complementary-warp weave structure but have coastal designs of birds in diagonal bands.<sup>176</sup> Uhle also found two large cotton textiles about the size of the Inca wrapped dresses, and listed in sequence with them, but woven with allover warp stripes and with some stripes having simple float patterning in what looks like a central coast style. One of these fabrics is two panels and the other is three, but still of nearly square dimensions.<sup>177</sup> Like the two belts, they seem to represent a highland type of garment made with local stylistic elements.

Among the many bags, over half are cotton. There are more than twenty plain and twenty striped examples. There are also some fourteen

camelid fiber bags with simple stripe patterns. Fourteen additional camelid fiber bags have some complementary-warp patterned stripes, and many of these include chevron designs and brown plain stripes, similar to the largest group of belts and probably a highland style (fig. 55).<sup>178</sup> Some have all brown plain stripes, while others have both dark and light plain stripes. The complementary-warp patterns are simple geometric designs, not the more elaborate zigzag and dot Inca motif. Only one bag has Inca style striped edge binding (2571a, 31560). Most of the others have the side edges covered in cross-knit loop stitch that is predominantly red with occasionally a few yellow stitches. None of these bags has a strap. They simply have a cord attached to one corner that can be tied around the top of the bag to close it. Several other bags of individual type were also found.

The provincial character of the belts, bags, and sandals probably relates to the ethnic origin of the weavers who supplied the storehouse from which the women were provisioned, and suggests that styles not strictly Inca were acceptable for taxes, at least for these garments. From currently available evidence, it appears that the Incas may have exercised greater control over the size and format of women's wrapped dresses and shawls and over men's tunics and bags submitted as tribute than over women's belts, bags, and sandals or men's mantles. Alternatively, or in addition, only identifiably Inca style wrapped dresses, shawls, and headbands may have been considered appropriate attire for cloistered women and female sacrifices, while the exact styles of belts, bags, and sandals may have been considered less important. Even the "Ice

Fig. 54. Narrow belt in a provincial highland style excavated by Max Uhle from the graves of the sacrificed women at Pachacamac. Complementary-warp weave, camelid fiber warp and weft. 4.655 x .033 m. University of Pennsylvania Museum, Philadelphia 31517 (Uhle number 2438) (neg. # S4-142170).





Maiden" found on Mt. Ampato was wearing moccasins, rather than Inca style sandals, although the rest of the garments she was wearing are Inca.

While the combination of research on archaeological remains and historical sources has yielded more information than anticipated, it is clear that there are aspects of Inca weaving and costume that remain unknown. Although the religious context must be borne in mind, the continuing archaeological research on mountaintop offerings can be expected to further amplify our knowledge and serve as a check on the findings presented here.

## Acknowledgments

A study of this kind is dependent on the generosity of museum staff in making the collections in their care available to outside researchers. I am particularly grateful to Lucy Fowler Williams, Keeper of the American Section of the University Museum, University of Pennsylvania, Philadelphia, for her hospitality and helpfulness in providing access to objects from Uhle's Pachacamac excavations (1990, 1992). I also thank Vuka Roussakis and Craig Morris of the American Museum of Natural History, New York; Deborah Wood and Felicia Pickering of the anthropology department at the National Museum of Natural History, Smithsonian Institution, Washington; Madeleine Fang and her volunteers at the Phoebe A. Hearst (formerly Lowie) Museum of Anthropology in Berkeley; Diana Fane, Kenneth Moser, Lois Martin, and Ellen Kuenzel at The Brooklyn Museum; Lloyd Cotsen and Karyn Zarubica at the Neutrogena Corporation, Los Angeles; Sophie Desrosiers and Miriam Rambure at the Musée de l'Homme, Paris (1988); Gerhard Baer and Christine Hartman at the Museum für Volkerkunde, Basel (1990); Sven-Erik Isacsson at the Göteborgs Etnografiska Museum (1991); Carl-Wolfgang Schumann and Birgit Liesenklas at the Deutsches Textilmuseum, Krefeld (1996); Zoe Annis Perkins of the Saint Louis Art Museum and Jeffrey B. Wilcox and Aimee Leonhard at the Museum of Art and Archaeology, University of Missouri-Columbia (1996). For travel to Krefeld, I am grateful for support from the Latin American Research Fund. Several private collectors have also shared their Inca textiles with me.

John H. Rowe and Johan Reinhard sent me copies of South American publications essential to this study. Librarians Mary Samms at The Textile Museum, Bridget Toledo of the Pre-Columbian



Library at Dumbarton Oaks, and Mayda Riopedre at the Anthropology library at the National Museum of Natural History, Smithsonian Institution, were also very helpful. As a relative neophyte to historical research, I am particularly grateful to John H. Rowe and Patricia J. Lyon for providing me with general guidance as well as specific references and access to their library of colonial chronicles. Catherine Julien graciously sent me a copy of an unpublished paper.

It is difficult to detail all the ways in which my father, John H. Rowe, has supported a project that overlaps so much with his own professional interest and expertise. I shamelessly exploited my advantage, and he always responded with patience and generosity.

The Textile Museum objects were photographed by Franko Khoury, except for figures 6, 27 (b & w), 39, 47, and 48. Amy Ward, Photographic Archives Coordinator at The Textile Museum, was also helpful.

## About the author

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Fig. 55. Bag in a provincial highland style excavated by Max Uhle from the graves of the sacrificed women at Pachacamac. Warp-faced plain weave and complementary-warp weave stripes, camelid fiber warp and weft. 17.5 x 19.5 cm. University of Pennsylvania Museum, Philadelphia 31555 (Uhle number 2235) (neg. # S4-142176).

## Notes

1. Use of the term *costume* follows Webster's first definition, "style of dress in general, including style of hair, etc." No implication of disguise or special occasion is intended. The present discussion encompasses non-textile ornaments and hairstyles as well as clothing.

2. The section on costume is lib. 14, cap. II; 1956, vol. II, pp. 237–40; 1990, pp. 185–89. The section on weaving is lib. 14, cap. XI; 1956, vol. II, pp. 258–60; 1990, pp. 223–26. Subsequent references to Cobo are to these sections unless otherwise noted.

3. Guaman Poma also depicts spinning on his pages 57 (which also shows a man plying), 221 [223], 225 [227], 298 [300]. The terms are from González Holguín 1608, p. 36; 1952, p. 44 (*calla*) and 1608, p. 291; 1952, p. 292 (*puchca*).

The orthographic spellings for Inca words given in the text are based on John H. Rowe's analysis of how the language was pronounced at the time of the Spanish conquest (J. H. Rowe 1950), which he calls "Classic Inca." These spellings supercede those in his 1946 article. Although he has himself published spellings of some costume terms according to this system (e.g., J. H. Rowe 1979), I am grateful to him for providing spellings for the additional terms mentioned here (personal communication 1996), as well as for many helpful discussions on the subject of Inca terminology. In some cases it is not possible to reconstruct the precise original pronunciation, so no orthographic spelling is given. It should also be noted that pronunciation of many terms varies among the different Inca dialects spoken today.

4. lib. 4, cap. XIII; 1945, p. 203; 1966, p. 215. Although Garcilaso's information on Inca history and religion is largely fanciful, he can probably be trusted on such small domestic details.

5. Uhle 1903, p. 96, figs. 120, 121; Bingham 1930, p. 212, figs. 182–84.

6. Goodell 1969, fig. 2; Franquemont 1986, fig. 8B.

7. lib. 14, cap. XI; 1956, vol. II, p. 258; 1990, p. 223.

8. Garcilaso, lib. 6, cap. XXV; 1945, p. 58; 1966, p. 369. González Holguín (1608, p. 236; 1952, p. 240) indicates that yarn spun this way was also used for thick blankets (*chussi*). He also gives an alternate word *pilluini* (orthographic spelling: *pilluiy*).

9. Goodell 1969, p. 6; Zorn 1982, pp. 48–49; Cahlander with Zorn and Rowe 1980, pp. 29–30.

10. See A. Rowe 1978 for a thorough discussion of the edges of Inca tapestry tunics. Figs. 6 and 7 show the heavy side selvage cords and projecting and chained warp loops; fig. 8 shows a heading cord.

11. The clearest case is an exposed side seam edge of a fragmentary Inca key patterned tunic in the Deutsches Textilmuseum in Krefeld, Germany (08452a,b). The Textile Museum has two tunics in which at least one neck-slit edge is finished in this manner. One is an Inca key patterned tunic in poor condition with only one neck edge preserved (TM 1966.59.28, illustrated J. H. Rowe 1979, fig. 6). The end selvages on the sides of this tunic have chained warp loops. The second example is a fragment with a provincial Inca design (crayfish), again with only one edge preserved (TM 91.830b).

12. I am grateful to Nobuko Kajitani of The Metropolitan Museum of Art, New York, for discussion and suggestions on this subject.

13. Nobuko Kajitani pointed out this feature to me with reference to a bag having undyed stripes on one side and dyed stripes on the other (Cahlander with Baizerman 1985, p. 27, fig. 4–1).

14. Unfortunately, my own previous work has contributed to the confusion in the literature (1977, p. 71, figs. 81, 82). Having since done much additional work on Inca textiles, I wish to rectify that error here. Enough of the embroidered edge bindings on The Textile Museum's shawl (fig. 27 here) are damaged for me to be able to verify the presence of chained warp loops on the warp selvages.

15. For more information on this structure, see Emery 1980, pp. 150–51 and A. Rowe 1977, chapter 10. Inca examples have 3/1 color changes and diagonals in two-span floats. In A. Rowe 1985 (pp. 64–65), in a further discussion of this basic structure, I suggested that it might be more precise to describe the sets of elements as "reciprocal" rather than "complementary." However, the term "complementary" is now both well understood and pervasive in the literature, while my notion of using "reciprocal" has had little effect. Also, Noémi Speiser (1983, p. 117) has suggested that the term "reciprocal" be used for techniques in which an effect at one end of a set of elements is automatically replicated at the other end, as is the case in sprang and in some braiding techniques.



16. J. H. Rowe 1979, p. 245.

17. In the shawl in figure 3 above, the weft yarns are paired, which is unusual in Inca textiles. The two shawls were found together with a two-panel rectangular dress in plain tan cotton which has a woven (rather than embroidered) edge binding; it probably represents a provincial variant (see below).

18. Some of the more recent and accessible publications include: McIntyre 1975, p. 79; Levenson 1991, p. 591; Reinhard 1992a, pp. 88–89; Sotheby's 1992, lot 34; Heyerdahl, Sandweiss, and Narváez 1995, pp. 107–9; Nov. 6, 1995, issues of *Time*, p. 60, and *Newsweek*, p. 74; Reinhard 1996, pp. 73, 77.

It is particularly difficult to distinguish warp and weft in these miniatures, but the cases in which I have been able to do so conform to the pattern.

19. A white feather headdress was found on the older of the women (wearing dyed clothes) found on Mt. Esmeralda in Chile (Checura Jeria 1977, p. 136), and a yellow headdress was found on one of the women (wearing undyed clothes) found on Mt. Ampato in Peru (Reinhard 1996, pp. 72, 79, 80).

20. Ramírez, who left Peru in 1580 after 10 years in Potosí, also indicates that it is coarse, and with few colors (1936, p. 24).

21. Falcón 1918, p. 149, cited by J. H. Rowe 1979, p. 240. In contrast to this idea, another source indicates that *qompi* was not generally woven of cotton: "If there was a *cumbi* weaver and no wool in his valley, he traded for it in a neighboring district with cotton or hot peppers" (Santillán, cap. 40; 1927, p. 38). This reference was brought to my attention by Patricia J. Lyon. However, fiber for textiles to be turned in to the government was generally supplied from imperial storehouses.

22. Ramírez 1936, p. 24. Acosta describes it in similar terms (lib. 4, cap. XLI; 1954, p. 136). J. H. Rowe (1946, p. 242 and 1979, p. 239) originally suggested that *qompi* correlated with Inca tapestry weaving.

23. Cobo's description of Inca featherwork and beadwork is taken in part from Pedro Pizarro, [1571] cap. 15, fol. 59v; 1978, p. 99. Pizarro saw the hummingbird feathers in one of the Inca storehouses.

24. Valcárcel 1935b, p. 193, Lám. VIII, no. 1/144.

25. VanStan 1979; Vreeland 1979, figs. 5–7; Purin 1990, vol. I, p. 323, fig. 251; Purin 1991, vol. I, p. 105, fig. 76.

26. Desrosiers (1986) has reported on a type of belt described by Murúa that he labeled "*cumbi*." The belt in question appears to me to be in a provincial style and not the imperial Inca style (see below).

27. See also J. H. Rowe 1979, pp. 239–41.

28. For example, Betanzos (1a pte., cap. XXII; 1996, p. 110) and Cobo (lib. 12, cap. 30; 1980, pp. 219–20).

29. Lists of Inca specialists are provided by Falcón (fol. 225v of 1571 manuscript; see Rostowrowski 1977, pp. 248–50), by Murúa (c. 1605 manuscript: lib. III, cap. LXVII; 1946, pp. 332–34. 1613 manuscript: lib. II, cap. 21; 1964, pp. 86–88), and by Guaman Poma, p. 191 [193]. In addition, the term *ahuay camayok*, "el texedor de oficio," appears in González Holguín (1952, p. 18), our best early dictionary.

Guaman Poma lists "conbicamayoc-bordadores y sederos . . . auacamayoc-dexedores." The second Murúa manuscript lists *qompi* weavers as *llano pacha camayos*, and weavers of ordinary cloth as *ahuapacha camayos*. "Llano" is Classic Inca *llañu* meaning "thin," and "*pacha*" is *p'acha*, meaning clothing, so the compound means fine clothing. "*Ahua*" is 'awa, as in 'awasqa. The first Murúa manuscript, as edited by Bayle, has *aguapachacamayos*, in which *agua* can be considered the same word as *ahua*, since Spanish writers use both "gu" and "hu" for the same Inca sound.

In comparison with these lists, which are all in good agreement with each other, that of Falcón presents problems: *Llano pachac compic* and *Haua compic camayo* for the coast and *Llanu compic*, *Haua compic* for the highlands. Since he also writes "hojota" for "ojota," it seems likely that "haua" should be "ahua," as in the other lists; there is an Inca word *haua* (*hawa*), but it makes no sense in this context. *Llano compic* and *haua compic* sounds like two kinds of *qompi*. However, he defines the latter as *basta*, Spanish for "coarse," which does not match any of our other definitions of *qompi*, and there is no other documentary support for two kinds of *qompi*. On the other hand, Falcón is earlier than the other sources cited and Inca tapestry does vary to some extent in quality.

30. Such a specialty is given additional support by the cache of Inca shawls and wrapped dresses found near Tambo Viejo in the Acari Valley. Most of the wrapped dresses in this cache were found in an unsewn state (Katterman and Riddell 1994).

31. Cieza de León (2a pte., cap. XVIII, fol. 24; 1985, p. 52); Santillán (para. 52; 1927, p. 43); Castro and Ortega 1936, p. 244. Polo de Ondegardo (1940, p. 165) describes a method of allotting work, but the quantity involved is unspecified. The incident of work allotment described by Betanzos (1a pte., cap. 13; 1996, p. 57) also is non-specific in quantity, but the work is obviously temporary, not continuous.

Murra (1962, p. 716) notes a contradiction within Santillán and Castro and Ortega as to whether taxpayers owed one garment per year or were weaving all the time. However, Murra does not refer to the existence of specialists, and it is clear from the context of the passages cited that this seeming contradiction is explained by the difference in the obligation of ordinary taxpayers and specialist weavers.

32. Cieza 1985, p. 52.

33. See also p. 227 [229], a nine year old, and p. 229 [231], a five year old.

34. *Acsu* is given by González Holguín (1608, p. 9; 1952, p. 17); by Guaman Poma in describing Inca dress in general (p. 117) and the dress of the wives of the Inca emperors (pp. 123, 125, 127, 131, 133, 135, 137, 139, 141, 143); also by Molina (1943, pp. 49, 52, 68), describing women's festival costume in the Cuzco area.

35. *Anacu* does not appear at all in González Holguín 1608. Guaman Poma uses it only in generalized discussions of dress when not referring specifically to Inca costume (pp. 77, 257 [259], 781 [795], 893 [907]). Two other early dictionaries, Anonymous 1586 (p. 15) and Torres Rubio and Figueredo 1754 (p. 218), give *anacu* (and not *acsu*) as the term used in Chinchay Suyu, the part of the empire north of Cuzco. In the Cuzco section of Torres Rubio and Figueredo 1754, both words occur, *acsu* defined as "saya de india" (f. 73v) and *anaco* as "manto de india" (f. 74v). I am grateful to John H. Rowe for bringing these dictionaries to my attention. Domingo de Santo Tomás, who did not work in the Cuzco area, lists both terms without differentiating them. Cobo's use of *anaco* rather than *aco* may be a reflection of his comparatively late date.

36. In modern Peru, the use of such a garment is relatively rare, but Castañeda (1981) calls a garment derived from the prehispanic style "anacu" though she does not always make it clear if this was the local term or not. She does say the term was used for the local style of dress in Piura on the north

coast (p. 67), and the term is also used in Huancabamba in the highlands near the Ecuadorian border (p. 73; see also Owen 1991). She also mentions the term in connection with costume in Lambayeque (p. 75), Cajamarca (p. 87), Tupe in Yauyos (p. 117; *anako* is the local word: Avalos de Matos 1952, p. 65), and the Mantaro Valley in the dept. of Junín (p. 127). An exception occurs in the Franciscan dictionary (Franciscanos 1905, p. 410, under *saya*) of Inca dialects, where *aksu* (= 'aksu) is given for Cuzco and *agshu* for Ancash. For Ecuador, see A. Rowe, ed., ms.

37. Uhle 1903. Although Uhle's report is of course valuable, I found some of his textile descriptions unclear. The descriptions in the following discussion are based on my own study of the pieces, not on his report.

38. Uhle 1903, p. 85, pl. 18, fig. 13.

39. Max Uhle to Department of Archaeology and Palaeontology, Lima, September 19, 1896, p.6. In: Expedition Records — South America — Max Uhle — Box 1, Folder 26; p. 128 in the English translation. University of Pennsylvania Museum Archives.

40. Uhle 1903, p. 37.

41. Uhle (1903, p. 90) counts eight of cotton, but one of the cotton dresses is made of coastal style fabric so I exclude it from my count. Of the full number, there were two camelid fiber dresses and three cotton ones that I did not actually see during my research at the University Museum.

42. Katterman and Riddell 1994, figs. 2-4, 6-9, what they call a "large manta."

43. Sotheby's 1994, lot 35.

44. Previously published in Uhle 1903, pl. 19, fig. 8, detail.

45. Fernández Baca Cosío 1989, figs. 296-343; Purin 1990, vol. II, p. 193, fig. 244.

46. A. Rowe, ed., ms. Cobo notes that the wrapped dresses were put on with the sides not overlapping very much so that the leg was exposed in walking, although Christian women in his time might sew up the sides. This is a peculiar statement, since the archaeological examples described above are all of generous size and could easily have overlapped enough at the side for modesty's sake, as is the case



also in places such as Ecuador where some women still wear this type of garment. Cobo may be referring to a practice he was acquainted with in the mid-17th century that does not reflect prehispanic custom. Guaman Poma (pp. 757 [771], 759 [773]) depicts two indigenous colonial noblewomen wearing wrapped dresses over Spanish style petticoats, in which the wrapped dress is smaller and the ends do not quite meet at the side.

47. The drawing on p. 242 [244] shows the folds clearly.

48. Examples include the female figurine from Copiapó (Reinhard 1992a, pp. 88–89; Palma 1991, p. 61), two figurines from Mt. Las Tórtolas (Beorchia Nigris 1987, Sección Comparativa, p. 6 of unnumbered plate pages), and the one from Mt. El Plomo (Mostny 1957, p. 47).

49. See also two figurines found on Mt. Mercedario in Argentina, now in the Museo Arqueológico of San Juan, Argentina (Beorchia Nigris 1987, Sección Comparativa, pp. 5, 8 of unnumbered plate pages, Sección Documental, Zona E, p. 3); two found on Mt. Gallán, Argentina, now in the Museo Etnográfico of Buenos Aires (Beorchia Nigris 1987, Sección Comparativa, pp. 4, 7, Sección Documental, Zona D, pp. 1–2, and Dransart 1995, pp. 50–53); one found on Mt. Pili in Chile (Beorchia Nigris 1987, Sección Comparativa, p. 6, and Dransart 1995, p. 53); one found "near Lima" (Baessler 1902–3, pl. 158, fig. 420, and Schmidt 1929, p. 367 top right).

It may be noted that the published information on the Mt. Gallán figurines is somewhat garbled. Fortunately, Beorchia Nigris publishes photographs taken by the discoverer, Mathías Rebitsch, evidently before they were undressed. These photographs indicate that one figurine (here designated "A," Sección Comparativa, p. 4) had a comparatively large dress and shawl, while the second (here designated "B," Sección Documental, Zona D, p. 1) had a smaller dress and shawl. However, in the photographs of the undressed figurines, one (Sección Comparativa, p. 7) includes the shawl, belt, and headdress of "A" with the dress and *tupu* cord of "B," while the other (Sección Documental, Zona D, p. 2) includes the dress and pins of "A" together with the shawl, belt, and headdress of "B." Dransart has published useful descriptions of these pieces (1995, pp. 50–52), but she has labeled both large garments as dresses and both small ones as shawls. A careful reading of her descriptions indicates that items 1, 2, 5, 7, and 9 belong to "A," while items 3, 4, 6, and 8 belong to "B." Items 2 and 3 are incorrectly labeled. Also her

fig. 4b does not answer to the description of item 3, as indicated, but rather to item 2.

50. For further white examples, see previous note and Sotheby's 1992, lot 34, right.

51. I am grateful to William Siegal of Santa Fe for the opportunity to examine this dress.

52. The observation of the discontinuous weft is by Nobuko Kajitani.

53. See Reinhard 1996, pp. 62–63 and p. 73 for the reconstruction drawing.

54. I am indebted to Sue Bergh for providing me with photographs and information on this piece. Unfortunately, the photographs were not suitable for reproduction here.

55. Checura Jeria 1977 describes the find, but of the textiles only a belt is illustrated; Beorchia Nigris 1987 also illustrates a *tupu* cord (Sección Documental, Zonas F-A-B, p. 16) and a detail of what appears, from the white edge binding, to be a wrapped dress (same section, p. 15).

56. A third smaller fragment (65.8 x 17.8 cm), without excavation information, is in the Deutsches Textilmuseum, Krefeld (12149). The only remaining selvedge is perpendicular to the stripes and has a white edge binding. The weaving is fine, 16 by 108 elements per cm, and is probably weft-faced, all camelid fiber. Parts of a triple and of a single complementary-weft patterned band are present.

57. For example, the 1586 governors' reports for Atunrucana (Córdova 1881) and for Rucanas Antamarcas (Monzón 1881) in the Ayacucho area, as well as Ramírez (who left Peru in 1580 after 10 years in Potosí), who specifies the size as two *varas* in length and width (1936, p. 23).

58. *Lliklla* is attested in González Holguín 1608, p. 208; 1952, p. 213 and many other authors. It is still widely used today.

59. The figurine from Mt. Copiapó in Chile is published in Palma 1991 and Reinhard 1992a, pp. 88–89. Other similar examples include one from Pachacamac (Schmidt 1929, p. 367 top center); two from Mt. Las Tórtolas, Chile, deposited in the Museo Arqueológico de la Serena (Beorchia Nigris 1987); Sotheby's 1992, lot 34, left; one from Mt. Ampato, Peru (*Time*, p. 60, and *Newsweek*, p. 74, Nov. 6, 1995).

60. See also Uhle 1903, pl. 19, fig. 7.

61. Accession number 88.96 is .82 x 1.22 m, while 88.97 is .75 x 1.12 m. Unfortunately, I did not have time to make a definite determination of warp and weft direction on these shawls during my all too brief visit to the museum. Thread counts of the surface elements provided to me by Jeffrey B. Wilcox, Registrar, are 38-44 for 88.96 and 32-36 for 88.97.

62. Katterman and Riddell 1994, figs. 10-13, is what they call a "small manta." Unassociated individual examples are in the collections of the Göteborgs Etnografiska Museum (22.2.22), 1.05 x .72 m, and The Brooklyn Museum (1857). The latter has an obvious area of terminal weaving (warp-faced).

63. This piece was among a group of textiles looted from various south coast sites that had been returned to Peru from Europe. I am grateful to Anita Cook for providing me with a photograph. The dimensions were calculated by multiplying from the scale in the photograph.

64. Pp. 126, 134, 136.

65. For examples, see note 49 above on the corresponding wrapped dresses. See also the figurine found as an offering at Túcume (Heyerdahl, Sandweiss, and Narváez 1995, p. 109) and another sold at Sotheby's (1992, lot 34, right).

The shawl worn by the well-known figurine found with the sacrificed boy on Mt. El Plomo is slightly aberrant, with features making it transitional between the dyed and undyed styles (color illustrations in Lothrop 1964, p. 218; McIntyre 1975, first page after the flyleaf and p. 79; Levenson 1991, no. 442, p. 591). The shawl is worn folded and has patterned bands, but the plain areas are brown (undyed) rather than red, and the patterned bands have areas of what seems to be terminal weaving, an indication that they are probably warp-patterned, as Dransart has pointed out (1995, p. 13). The fact that the dress is undyed while the head-dress has red feathers also makes this figurine transitional between the two more frequently found types. A fragmentary miniature wrapped dress in the Museum of Mankind, British Museum, London (Dransart 1995, fig. 7 and p. 55) also has patterned bands and plain brown areas.

66. Also published in Hyslop and Mujica 1992, p. 79, fig. 15.

67. Illustrated in color in Kahlenberg 1996, p. 78 (but with all the edges cut off).

68. Also published in Uhle 1903, pl. 19, fig. 6 (folded).

69. Reinhard 1996, p. 72. There is also a small fragment of a shawl of this style in The Brooklyn Museum collection (67.159.30), which has a portion of the chained warp selvedge preserved, and a warp of white cotton.

70. Molina, 14th Nov.; 1943, p. 53; 1959, p. 71.

71. Molina 1943, p. 68; 1959, p. 90, after Abril, brought to my attention by John H. Rowe. In the first passage (cited in the preceding note) the term for the "bag-like" garment is left blank by the copyist, who evidently could not read the original manuscript. However, in the second passage the term *gorra* (cap) is present in this position. In the 1943 edition, the editor has filled the blank in the first passage with the term *cushma* (for which term see the discussion under the man's tunic in this article), but the second passage makes it clear that this is incorrect.

72. González Holguín 1608, p. 17; 1952, p. 25. An anomalous use of the term occurs in a drawing of Manco Capac, the legendary first Inca emperor, in Murúa's first manuscript, where a man's *t'oqapu* waistband tunic is labeled as *ancallo* (Ossio 1984, pl. 4).

73. Cobo may have taken this information from Zarate (lib. I, cap. VII; 1944, p. 36), who was in Peru in 1544-45, and whose book had two early editions, 1555 (Anvers) and 1578 (Seville).

74. For Sacsahuaman, see Valcárcel 1934a and b, 1935a and b; Purin 1990, vol. I, fig. 237); for Ollantaytambo, see Llanos 1936; for Machu Picchu, see Bingham 1930, p. 184, figs. 149, 151, 152, p. 185, fig. 155, text on pp. 181 and 186; for Cuzco itself, see Vallès-Bled et al. 1992, pp. 240-41, nos. 211, 212.

75. Uhle 1903, p. 89; see also pl. 19, fig. 10.

76. Julien ms. The observation was conveyed to me by Patricia J. Lyon.

77. Anonymous dictionary of 1586, p. 84, and González Holguín 1608, p. 344; 1952, p. 343 (*tipiqui*) and 1608, p. 348; 1952, p. 347 (*tupu*).

In the Franciscan dictionary of Inca dialects



(Franciscanos 1905, p. 36), *alfiler grande* is *tupu* and *alfiler* is *ttipqui* for Cuzco. However, for Ayacucho and Junin, *alfiler grande* is *tipqui* and *alfiler* is another word entirely.

78. Illustrated in Beorchia Nigris 1987, Sección Documental, Zonas F-A-C, p. 16 of unnumbered plate pages, upper right.

79. See also Valcárcel 1935b, láms. I-II.

80. Palma 1991, p. 57 and fig. 4. This drawing depicts a circular wrap. A figure-eight wrap would also be theoretically possible.

81. See also Uhle 1903, p. 95, fig. 112 (drawing).

82. Valcárcel 1935b, lám. VII.

83. González Holguín 1608, p. 284; 1952, p. 286; Guaman Poma, p. 117. The way the term is defined and used by both authors is plural.

84. Uhle illustrates a necklace (1903, p. 95, fig. 113).

85. *Chumpi* is listed in González Holguín 1608, p. 113; 1952, p. 121, and elsewhere.

86. Another miniature belt in The Brooklyn Museum is unusual in being woven in complementary-warp weave with diamond and "X" motifs (41.1275.108c).

87. Palma 1991, p. 58.

88. For the Esmeralda belt see: Checura Jeria 1977, illus. p. 136; Beorchia Nigris 1987, Sección Documental, Zonas F-A-B, p. 16 of unnumbered plate pages; Dávalos, Cereceda, and Martínez 1992, il. 37 after p. 100, in color. For the Mismi belt, see Beorchia Nigris 1987, Sección Documental, Zonas F-A-B, p. 7.

89. The Munich belt (G.2477) is illustrated in Desrosiers 1986, pp. 223, 237, fig. 10.

90. *Wincha* is listed in González Holguín 1608, p. 354; 1952, p. 353 and elsewhere.

91. Purin 1990, vol. II, p. 308; 1991, vol. II, p. 276; J. H. Rowe 1996, pp. 302, 304. González Holguín (1608, p. 354; 1952, p. 353) indicates that *vincha* can be used for a hair fastener as well as a headband, but whether these ornaments are meant is unclear.

92. For *ñañaca*, see Monzón [1586], para. 15; 1881, vol. I, p. 207; González Holguín 1608, II, p. 327; 1952, p. 689; Guaman Poma p. 546 [660]; Torres Rubio and Figueredo 1754, f. 94 (Cuzco list only). Both terms appear in the Anonymous 1586 dictionary (p. 158, under *mantellina*), neither one specified as from Chinchay Suyu. González Holguín also lists *ñiaca* (1608, p. 370; 1952, p. 368) and *pamppaccuna* (1608, p. 273; 1952, p. 276). Cobo uses *pampacona* only.

93. Monzón [1586], para 15; 1881, vol. I, p. 207.

94. *Vncu* appears in González Holguín 1608, p. 357; 1952, p. 355, as well as in many other sources.

95. Anonymous 1586 (p. 123) and Torres Rubio and Figueredo (1754, fols. 117, 219) both give *uncu* as the Cuzco term and *cusma* as the Chinchay Suyu term. González Holguín does not list *cusma*. Garcilaso (lib. 4, cap. II; 1966, p. 198) says that *cusma* is from a provincial dialect. Vásquez de Espinosa ([1629] lib. 4, cap. 80, para. 1523; 1948, p. 524) also says that *Vncu* is used "en la lengua propia" and *Cusma* "en la corrupta." Guaman Poma uses *cusma* only in the context of generalized, not necessarily Inca, costume (p. 60); he uses the Spanish term *camiseta* for the tunics of the emperors. Domingo de Santo Tomás (1560, fols. 26 and 294), who did not work in Cuzco, lists both terms without differentiation.

96. See, e.g., Castañeda 1981, pp. 185-90.

97. See J. H. Rowe 1979.

98. See A. Rowe 1978.

99. For example, Cobo and González Holguín 1608, p. 363; 1952, p. 362.

100. Loose: pp. 86, 88, 100, 126, 153, 198 [200], 238 [240], 335 [337], 346 [348], 352 [354], etc. Tied under one arm: pp. 98, 204 [206], 354 [356]. Tied in front under the chin: pp. 115, 242 [244], 258 [260], 318 [320], 342 [344]. Tied around the waist: pp. 112, 163 [165], 202 [204], 206 [208]. Tied on the right shoulder: p. 108. Two corners over right shoulder: p. 362 [364]. Over the head: pp. 236 [238], 254 [256], 284 [286], 304 [306].

101. The one from Mt. Copiapó is also published in Palma 1991, p. 74; Reinhard, 1992b, p. 163, fig. 16. The one in the American Museum of Natural History is also published in Jones 1974, p. 5; Morris and Thompson 1985, pl. VII color. Another white

one belongs to a figurine in the Museo de Sitio, Pachacamac (Purin 1990, vol. I, p. 314; Levenson 1991, p. 592, no. 448). Another white one occurs on a figurine from Mt. Gallán (Beorchia Nigris 1987, Sección Comparativa, p. 7; Dransart 1995, item 10, pp. 52–53), and a brown one was found with a figurine on Mt. Pili in Chile (Beorchia Nigris 1987, Sección Comparativa, pp. 6, 11; Dransart 1995, item 17, p. 54). A fifth example, in the collection of the Museum für Völkerkunde, Basel, acquired with a tunic and bag but no figurine, is brownish purple, with red and gold embroidery (23583, unpublished).

102. Additional full-sized examples include a complete piece in the Göteborgs Etnografiska Museum, said to be from Ica (Gaffron Collection), 1.67 x .82 m in size, that also is of undyed creamy color (30.28.51) and one in the Musée de l'Homme in Paris, 1.58 x .93 m, of two panels, now dark brown in color (X47.5/463). I was unable to examine the Göteborg piece, but its proportions and edge binding were entirely recognizable in the watercolor on the catalogue card.

103. The size of Inca examples is thus both smaller and of different proportions than Cobo's description of two and a quarter *varas* by a *vara* and three quarters (about 1.90 x 1.50 m). Probably the style described by Cobo represents a change during the Colonial Period.

104. This pattern in the edge binding is also found on the fine tapestry-woven mantle in the Museum of Fine Arts, Boston (1988.325), which thus is based on the Inca man's mantle form, although it is attributed to the early Colonial Period (Stone-Miller 1992, pp. 179–82). Its size (1.71 x 1.19 m) is intermediate between mantles from the period of the Inca empire and the colonial style described by Cobo (see previous note).

105. Besides Cobo, see, for example, González Holguín 1608, p. 176; 1952, p. 182.

106. See also Uhle 1903, pl. 7, fig. 13.

107. Ibid., p. 37. The finds included an Inca plate (pl. 7, fig. 15) and other goods discussed below.

108. Lib. 6, cap. XXVII; 1945, vol. II, p. 61; 1966, p. 373.

109. See J. H. Rowe 1946, pp. 283–84; also Betanzos, cap. XIV; 1996, pp. 59–64.

110. See J. H. Rowe 1946, pp. 260–61 for further detail and references.

111. The term *llauto* appears in the Anonymous dictionary of 1586; González Holguín 1608, p. 208; 1952, p. 212; Guaman Poma, pp. 87, 89, 97, 103, 109; Garcilaso, tomo 1, lib. 1, cap. XXII, lib. 4, cap. II; 1966, pp. 56, 198; and elsewhere.

112. Cobo's description appears to be based on Pedro Pizarro's (cap. 12, fol. 40; 1978, p. 66) eyewitness account of the headgear of the emperor Atahualpa (Atahualpa).

113. Levenson 1991, p. 592, no. 446. One of the figurines from Túcume also has the *llawt'u* wound on the head (Heyerdahl, Sandweiss, and Narváez 1995, fig. 79).

114. The Pachacamac figurine has been illustrated in Purin 1990, vol. I, p. 314; Levenson 1991, p. 592, no. 448. For the Copiapó figurine, see also Palma 1991, pp. 59, 76. Palma says that the braid was made with five loops.

115. Levenson 1991, p. 592, no. 447.

116. Uhle 1903, pl. 7, figs. 10, 11; see also text p. 38.

117. Pt. 1, lib. 1, cap. 22; 1966, p. 56. See also Cieza de León 1553, 1a pte., cap. 97; 1986, p. 268.

118. Acuña [1586]; 1881, vol. II, p. 14. The term *llauto* is also mentioned for Capamarca (p. 25 "de colores"), Colquemarca (p. 29), and Bellille and Chamaca (p. 32), without mentioning particular colors. These places were in the provinces of Cotapampa and Chumpivilca.

119. The term *umachuco* is given by Guaman Poma (pp. 99, 101, 105, 107, 111, 116) as well as by González Holguín (1608, p. 111; 1952, pp. 118, 354) and Domingo de Santo Tomás (1560, fol. 138v), both of whom specify that the helmet is made of leather (*cuero*). *Uma* means "head."

120. This meaning of *canipu* is given by González Holguín (1608, p. 42; 1952, p. 50). He specifies the ornament as being silver, but other metals were apparently also used. Molina (1959, p. 36) also lists this term among the gold jewelry worn by an idol in the Temple of the Sun in Cuzco. The original pronunciation is uncertain. Cobo seems to confuse this item with the metal disks worn by military captains (discussed below).



121. This suggestion is courtesy of John H. Rowe (personal communication 1996). It is based on Guaman Poma's drawing of the emperor's advisors, p. 364 [366] with commentary on p. 365 [367] referring to Hanan Cuzco and Hurin Cuzco.

122. Vallès-Bled et al. 1992, pp. 250–51, nos. 225, 226, one gold and one copper alloy, both 14.6 x 11.4 cm (both shown upside down), held by the University Museum in Cuzco; Bandelier 1910, pl. XXXII, fig. 3, "metallic" (no scale), found on the Isla del Sol in Lake Titicaca.

123. Betanzos (cap. XXI; 1996, p. 106) says that men of the Emperor Pachacuti's lineage were entitled to wear one or two hawk feathers in their *llawt'u*. Garcilaso (lib. 6, cap. XXVIII; 1966, p. 375) says that a pair of hawk feathers was originally worn only by the emperor, but that after the Spanish conquest, it became more general.

124. This ornament is described by Pedro Pizarro as he saw it worn by Atau Huallpa (cap. 12, fol. 40; 1978, p. 66), and it appears that Cobo's description (lib. 12, cap. 36; 1979, p. 245) is based on Pizarro's. It is also depicted in numerous drawings by Guaman Poma. The precise original pronunciation is uncertain (*mazqa paycha* is likely) but the general Spanish spelling given is attested in González Holguín (1608, p. 228; 1952, p. 232) as well as in Guaman Poma (p. 87, 99, 101, etc.), Cobo (loc. cit.), and elsewhere.

125. As previously pointed out by John H. Rowe, the male hairstyle described by Cobo postdates the Spanish conquest (foreword in Cobo 1980, p. ix). Cobo does describe the hairstyle of the Inca emperor as very short (lib. 12, cap. 36; 1979, p. 245). This section of Cobo draws from Pedro Pizarro's eyewitness account of the dress of Emperor Atau Huallpa (cap. 12, fol. 40; 1978, p. 66). Pizarro confirms that all Inca noblemen wore their hair this way, as do several other sources, including Betanzos (1a pte., cap. XV; 1996, p. 68), Garcilaso (1a pte., lib. 1, cap. 22; 1966, p. 55), and Guaman Poma.

126. The term *pacu* is given in González Holguín 1608, p. 268; p. 271. The same word is used for *mushroom*, probably not a coincidence.

127. See also the Musée de l'Homme figurine (Levenson 1991, p. 592, no. 447), although oddly, most figurines show the earlobes with large holes but without earplugs.

128. Part 1, book 1, chapter 23; 1966, p. 57. Earplugs of a specific material were worn by particular "tribes" among the Incas by privilege. Their privileges included wearing the hairstyle and *llawt'u* as well as earplugs similar to those of royal descent. On this point, see also Guaman Poma, p. 85.

129. Uhle 1903, p. 38 and pl. 7, fig. 16. UM 27548a,b (Uhle number 1007d,e); also UM 27550 (Uhle number 1007f,g); UM 27551a,b (Uhle number 1044e,f).

130. *Chipana* is given in González Holguín (1952, p. 111), Cobo, and elsewhere. The small masks mentioned by Cobo as worn on the ankles, shoulders, or knees, are a colonial introduction (depicted in some later colonial paintings), not attested in earlier sources on Inca costume.

131. *Purapura* is found in the Anonymous dictionary of 1586 (p. 73) and González Holguín (1608, p. 295; 1952, p. 297). Guaman Poma includes it in a list of military equipment (p. 64). Joan de Santa Cruz Pachacuti mentions it in several places among gifts given to military leaders (1927, pp. 174: section on Yahuarhuacac Inca Yupanqui, 190: section on Tupa Inca Yupanqui, 206: section on Huayna Capac, 217: section on Huascar Inca; see also 1879, pp. 267, 282, 297, 309). He says it helped shield the wearer. Its original pronunciation is uncertain.

132. The Anonymous dictionary of 1586, pp. 39, 93 and González Holguín 1608, pp. 117, 372; 1952, pp. 125, 371.

133. King 1958, pl. II right.

134. See also A. Rowe 1977, p. 83, fig. 102, a warp-patterned example.

135. King 1958, pls. I–III.

136. See also Schmidt 1929, p. 480 (with butterfly designs). This bag is said to be from Pachacamac and has the same type of edge binding as the Textile Museum example in figure 48. Schmidt attributes the bag to the Inca style, but does not specify on what basis.

137. For further examples, see Cahlander with Baizerman 1985, p. 27, fig. 4-1, p. 28, figs. 4-2, 4-3, pls. 6, 10.

138. Schmidt (1929, p. 529) illustrates one feather-covered example and three with interlaced basketry on the outside, all said to be from Ica. Two are

wrapped with slings. The basketry resembles other Ica style basketry (compare Schmidt 1929, p. 527, right-hand examples), so it could be a local addition.

139. Uhle 1903, pl. 7, fig. 18 and pp. 38-39. A feathered bundle was found with the Inca human sacrifice on Mt. El Plomo in Chile (Mostny 1957, Lám. 11b; McIntyre 1975, pp. 78-79), and with one of the Inca figurines buried on the summit of Mt. Mercedario in Argentina (Beorchia Nigris 1987, Sección Comparativa, p. 10 of unnumbered plate pages); Michieli 1990, pp. 23-25). See also Sotheby's 1992, lot 34, sold with two Inca figurines.

140. The feather identification is by John O'Neill, 1983. There is also one pure yellow feather that could be Blue and Yellow Macaw and a few Chilean Flamingo feathers.

141. *Vssuta* is also attested in González Holguín 1608, p. 360; 1952, p. 359, and most other sources. González Holguín gives another term *chicha*, which he defines as a sandal or shoe with two or three soles (1952, p. 107), but it seems uncommon.

142. Betanzos, 1a pte., cap. XXI; 1996, p. 105.

143. Cieza de León (1a. pte., 1553, cap. xli, fol. 60; 1986, p. 132) and Pedro Pizarro ([1571] cap. 15, fol. 60; 1986, p. 100). The term used for the fiber in these accounts is *cabuya*, a Taino word taken up by the Spanish. Sandals with braided fiber sole and ties like the leather examples are illustrated in Schmidt 1929, p. 532, upper left and Disselhoff 1967, p. 71, upper left. In descriptions of the boy's initiation ceremony, sandals made of a type of *paja* (a Spanish word for *straw*) are mentioned (Betanzos cap. XIV, 1968, p. 42; 1996, p. 62; Molina, 14th Nov.; 1943, p. 52; 1959, p. 70).

144. [1571] cap. 16, fols. 67-67v; 1986, p. 112.

145. 2a pte., cap. XXIII; 1985, p. 68.

146. Acosta 1590, lib. 6, cap. 16; 1954, p. 197.

147. For Chimú men's costume, see A. Rowe 1984. For women's costume, see Bruce 1986. There is no publication specifically on Chancay costume, but see Horié 1991, figs. 1, 2, and various illustrations in Tsunoyama 1977.

148. Uhle 1903, p. 68, fig. 94; Kajitani 1982, p. 73, pl. 101.

149. See J. H. Rowe 1979, p. 240.

150. Of these additional textiles, Uhle 1903 provides design drawings for the diamond band tunic (pl. 7, fig. 20a), the brocaded tunic (p. 38, fig. 50), and the brocaded mantle (p. 38, fig. 52).

151. Only the *t'oqapu* band tunic is illustrated (Uhle 1903, pl. 7, fig. 19).

152. Similarly, a provincial style of mantle was found with two Inca style tunics by Ubbelohde-Doering at Los Majuelos in the Nasca Valley (Ubbelohde-Doering 1952, nos. 46 and 50; see also A. Rowe 1992, fig. 35).

153. Menzel 1976, pp. 22, 235-36.

154. Bruhns 1994, p. 192, fig. 12.6; Schmidt 1929, p. 233.

155. A. Rowe 1991, pp. 113-14.

156. For Huari women's costume, see *ibid.*, pp. 116-17.

157. For San Pedro de Atacama, see Rodman 1992, p. 326. For Estuquiña, see Clark 1990, pp. 129-30.

158. Ulloa 1982, p. 112.

159. Simileld 1981.

160. Mostny 1957; McIntyre 1975, pp. 78-79.

161. Mostny (1957, p. 37) says that this ornament was not fastened to the body when it arrived at the museum, and the people who brought it said it had been found on the chest. Three attachment holes indicate its top edge, corresponding to Guaman Poma's representations (pp. 147, 169 [171], 270 [272], 293 [295], 324 [326]). Pedro Pizarro (cap. 16, fol. 66v; 1986, p. 111) indicates that the Colla type of hat was worn for a considerable distance south of the lake.

162. Schobinger, ed., 1966 and Michieli 1990, pp. 2-14. For the Inca sandal, see Schobinger 1966, "ojota #1," pp. 113-14 (by Rogelio Díaz Costa) and fig. 63; Michieli 1990, pp. 11-12 and drawing p. 72. Michieli confirms that the other sandals were a local style.

163. 1903, pl. 19, nos. 12, 13.

164. Pedro de Córdova for Atunrucana, and Luis de



Monzón for Rucanas Antamarcas, both in paragraph 15 (1881, vol. I, pp. 189, 207). The wording in these two texts is very similar, as if the authors had conferred with each other. The account by Pedro de Carabajal for Vilcas Guaman, in the province just to the north of Rucanas, also mentions the use of wide and narrow belts, but without using the term *mamachumbi* (ibid., p. 149). During the Inca empire, Vilcas was inhabited mostly by colonists from the Cuzco area (J. H. Rowe 1946, p. 188).

The term *mamachumpi* does appear in the Anonymous dictionary of 1586 (p. 57) and in González Holguín 1608, p. 221; 1952, p. 225 (*maman chumpi*).

165. Noblemen's costume: pp. 165 [167], 289 [291], 320 [322], 335 [337], 348 [350], 358 [360]. Women's costume: pp. 173 [175], 289 [291], 320 [322].

166. Uhle 1903, pl. 19, fig. 2; Wardle 1936, pl. I. The double-layer construction is explained in Wardle 1936, pp. 25-29, and in A. Rowe 1977, pp. 94-97.

167. Rydén 1947, figs. 196, 197. The *chullpas* are identified as "Colla" and the belt regarded as a trade item. Rydén recognizes the similarity to modern Chipaya belts.

168. Desrosiers and Pulini 1992, p. 58, fig. 48.

169. Uhle 1903, pl. 19, fig. 5; Wardle pl. VII.

170. Uhle 1903, p. 91, fig. 106a, b.

171. Ibid., fig. 106c-f.

172. See Desrosiers 1986. These belts have 2/2 horizontal color changes. A modern belt from Vilcapampa in the Department of Apurimac in Peru that combines this technique with chevrons in reverse directions is illustrated in the same article, fig. 18.

173. Wardle 1936, pl. IV. These belts are not as thick as the chevron-patterned belts.

174. Wardle 1936, pl. V.

175. Uhle 1903, pl. 19, fig. 1; Wardle 1936, pl. VI. For a related belt found on the south coast in an Inca occupation period context, see Menzel 1977, fig. 16.

176. Uhle 1903, pl. 19, figs. 3, 4; Wardle 1936, pls. II, III; Cahlander with Baizerman 1985, p. 24, fig. 3-7.

177. The two-panel fabric is UM 31678 (Uhle number 2458) and measures 1.36 x 1.47 m. Uhle appears to include this textile in his tally of wrapped dresses. The three-panel fabric is UM 31679 (Uhle number 2468) and measures 1.52 x 1.43 m. The weave of both textiles is warp-predominant, and the patterned stripes are in simple plain-weave-derived float weave creating small X and O motifs.

178. See Uhle 1903, pl. 19, fig. 11 and p. 92, fig. 109.

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